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THE RURAL SCHOOL SYSTEM OF MINNESOTA

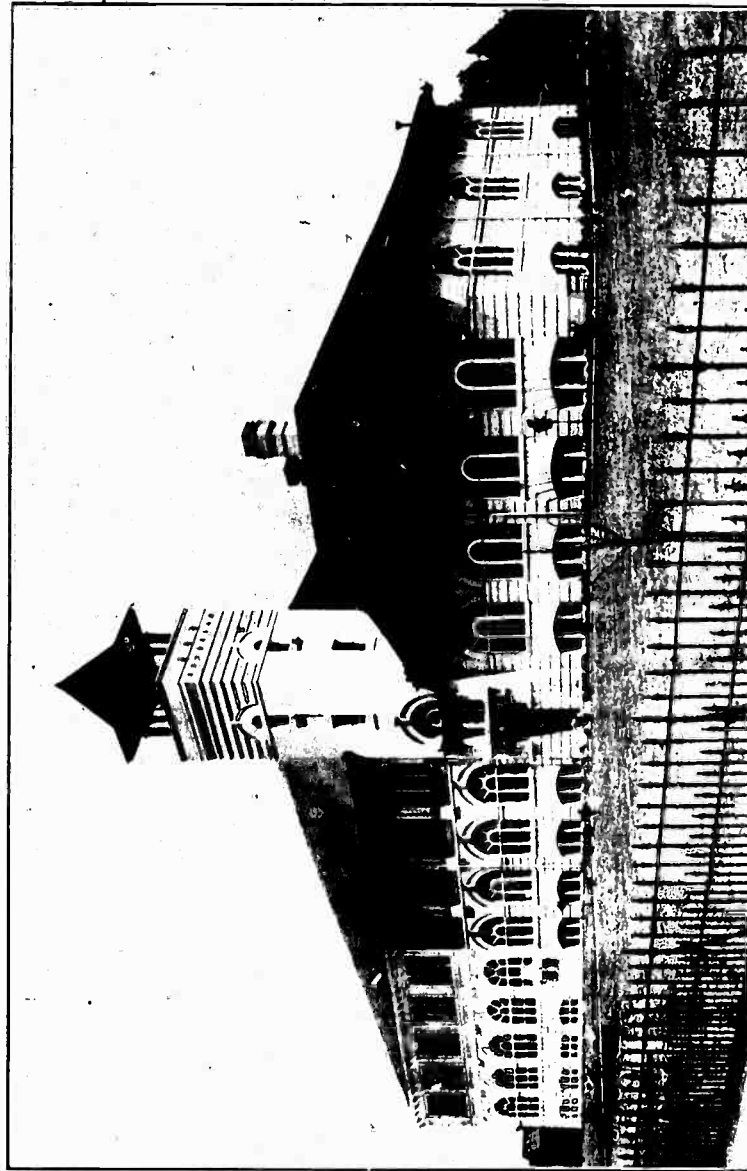
A STUDY IN SCHOOL EFFICIENCY

By H. W. FOGHT

SPECIALIST IN RURAL SCHOOL PRACTICE
BUREAU OF EDUCATION



WASHINGTON
GOVERNMENT PRINTING OFFICE
1915



CENTRAL HIGH SCHOOL (CONSOLIDATED) AT GRAND RAPIDS.

Eighth-year graduates from all the 60 outlying schools of district No. 1, Itasca County, who desire further education and either conveyed to the school free of charge or their living expenses are paid by the district while they are in school, attending.

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CONTENTS.

Letter of transmittal.....	Page 5
Preface.....	6
I. General outline.....	7
Introductory statement.....	7
A liberal system of school maintenance.....	7
State aid to public schools.....	8
The greatest weakness in the system.....	9
A variety of units of school organization.....	9
Associated schools, or schools of the trading center.....	10
Rapid progress in school consolidation.....	11
Growing interest in a larger unit of organization.....	11
Minnesota successful in fitting the rural schools to the needs of the open country.....	12
II. Work of the large undivided school districts.....	12
How the large districts are organized.....	12
A businesslike administration.....	13
How the system works in practice.....	14
The story of school district No. 1, Itasca County, an illustration to the point.....	15
Some interesting phases of school work in district No. 2, Itasca County.....	18
III. Associated schools, or schools of the trading center.....	20
A successful compromise in school centralization.....	20
The Putnam Act and school association.....	20
General advantages of school association.....	21
A concrete illustration.....	22
Chatfield associated schools.....	25
IV. Consolidation and genuine community schools.....	28
The public beginning to realize wastefulness under the old system.....	28
Minnesota consolidated schools becoming effective community centers.....	29
Consolidation easily attained because of liberal laws.....	29
State aid the great spur.....	30
Degree of success in consolidation dependent on proper safeguarding.....	30
Progress in consolidation both rapid and substantial.....	32
V. Industrial education and rural-school progress.....	33
The industrial subjects and new school interest.....	33
Satisfactory progress in industrial education under the Putnam and Benson-Lee Acts.....	34
Statutory requirements for industrial aid.....	34
State high-school board charged with maintaining regulations for industrial aid.....	35
Comments on the industrial subjects.....	35
Short courses for the whole community.....	40

	Page.
VI. Teacher training for the rural schools.....	43
Schools where this training is offered.....	43
Special training courses in high schools.....	43
Weakness of the training departments as now organized.....	44
Some of the requirements under the Minnesota law.....	44
Practical side of the training.....	45

APPENDIX.

Rules and regulations of the Minnesota State Department of Education.....	47
Regulations of the State high-school board.....	49
Typical short courses.....	51
Plans of the State supervisor of teacher training in high schools.....	54

ILLUSTRATIONS.

PLATE 1. Central high school (consolidated) at Grand Rapids.....	Frontispiece.
2. A. Type of small one-teacher school in the new clearings; B. Consolidated school, Deer River District, No. 2, Itasca County.....	16
3. A. School farm in connection with the Deer River consolidated school; B. Workshop in a good consolidated school in northern Minnesota.....	16
4. A. Model one-teacher school in district No. 2, Itasca County; B. A portable schoolhouse in a new logging camp of Itasca County.....	16
5. A. Two-room rural school in the Itasca County clearings; B. Spring Valley associated schools.....	16
6. A. Spring Valley associated schools; B. Thrashing on a farm on the Spring Valley associated school.....	24
7. A. Central building of the Chatfield associated schools; B. Chatfield cooperative laundry.....	24
8. A. Chatfield associated schools; B. Sauk Center farm.....	32
9. A. Studying stock; B. Testing eggs for fertility.....	40
10. Manual training class in Le Sueur High School.....	40
FIGURE 1. Map of Itasca County, Minn.....	15
2. Map showing Chatfield, Minn., associate schools.....	25
3. State map of consolidated schools.....	31
4. Extension work in Minnesota.....	38

LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,

Washington, D. C., October 24, 1914.

SIR: Through what seems to be a very wise adaptation of methods of support and administration to schools of different kinds and to schools working under varying conditions in different parts of the State, but still preserving a high degree of correlation and unity of purpose, and by a commendable degree of liberality in expenditures for education, the State of Minnesota has made remarkable progress in improving the efficiency of its rural schools. Believing that an account of this improvement, and of the methods and means by which it has been wrought, would be helpful to those working for the improvement of rural schools in other States, I detailed Harold W. Foght, one of the bureau's specialists in rural education, to go to Minnesota and study its rural schools and prepare such an account for publication. The accompanying manuscript embodies the results of his studies. I recommend that it be published as a bulletin of the Bureau of Education for distribution among those who are directly interested in the improvement of rural schools in the United States.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

PREFACE.

The following brief study is the result of several weeks' first-hand observations of the rural schools of Minnesota.

This State at an early date committed itself to certain educational policies that have made possible the establishment of its present comprehensive system of rural and village schools. Perhaps no other State has been quite as successful as Minnesota in establishing a system of schools intended to meet the demands of modern rural life, and it is for this reason that the study was made.

The purpose has been to emphasize only those phases of the rural school system that have a definite relation to the successful operation of the schools. These are, in brief (1) school maintenance, especially with general and special State aid; (2) units of school organization, falling under the heads of small districts, large undivided districts, and unorganized territory; (3) kinds of school organization, comprising consolidated and associated schools; (4) agriculture and other industrial subjects in all the schools; and (5) rural teacher training in high schools.

Acknowledgment is due the Minnesota State Department of Education for assistance freely given; especially to State Supt. C. G. Schulz, who has read these pages through and offered valuable suggestions; to Mr. E. M. Phillips, ex-State rural school commissioner, and Mr. George B. Aiton, ex-State high-school inspector, both of whom took great pains in planning the trips of investigation. Similar acknowledgment is due Supts. E. A. Freeman, of Grand Rapids; George E. Keenan, of Deer River; F. E. Maxon, of Spring Valley; E. B. Forney, of Chatfield; Miss Annie E. Shelland, county superintendent of Kochiching County; and many others for photographs, printed materials, and other valuable helps and information.

H. W. F.

September 15, 1914.

THE RURAL SCHOOL SYSTEM OF MINNESOTA.

I. GENERAL OUTLINE.

Introductory statement.—Minnesota is making rapid progress in organizing its rural schools to meet the needs of present-day agricultural life. Its schoolmen and legislators recognize that preparation for life in rural communities can be given in schools specially organized to meet rural needs. The one-teacher schools of the State are, on the average, as efficient as those in other States; but they have proved unable to meet the needs of modern farming in preparing the children for practical and contented lives on the soil. Consequently, Minnesota has adopted a policy of discouraging all further decentralization of school effort by seeking to save its school districts from further subdivision into smaller units, and of encouraging centralization of schools, either through association or consolidation wherever practicable. Some excellent legislation has made the reorganization reasonably easy of attainment. Then, too, liberal State aid has provided the spur to hasten the work of change. Most important of all, the men who are responsible for the reorganization have kept well in mind that the new schools must be rooted firmly to the soil.

Some States have made the great mistake of consolidating their schools in urban places, retaining in them courses of study poorly adapted to the needs of country children. This may be a gain to the town, but it means loss to rural districts. Other States have carried courses planned for city conditions to consolidated schools set in the open country. Such a practice is a serious obstacle to the speedy organization of our national agricultural life. Minnesota has many consolidated and central schools in associated systems that are located in large and small villages; but where this is the case the courses of study, equipment, experimental plats, and all other things offered the country children invariably point the way back to the soil and are sufficient to train them for contented agricultural life. The Minnesota practice is to consolidate the schools in the open country or on the edge of the rural-minded villages, where the workers can be convenient to the soil.

A liberal system of school maintenance.—The rural schools of the State draw their support from the following sources: (1) Apportionment per pupil; derived from the interest on the permanent school

fund and a State tax of 1 mill on all taxable property; (2) a local tax of 1 mill on all assessed property within the school district; (3) special aid voted by the State legislature; (4) proceeds from fines, etc.; and (5) local taxes voted at the annual school meetings. Local taxes comprise about 59.9 per cent of the entire income, State taxes 14.7 per cent, and the permanent State fund and "other sources" 25.4 per cent.

The productive permanent State fund is approximately \$25,000,000, and this amount is being increased at the rate of about \$1,000,000 annually from the sale of land and timber and royalty from iron ore mined on the school lands, of which there still remain some 800,000 acres. The income of this fund, together with the State mill tax, amounted for the past year to \$5.60 per pupil throughout the State.

The following table shows the rapid growth of the permanent State fund:

TABLE 1.—*Permanent school fund—Growth by decades.*

1870.....	\$2,426,240
1880.....	4,449,725
1890.....	9,241,119
1900.....	12,546,529
1910.....	21,002,571
1914.....	24,401,847

State aid to public schools.—Liberal aid is extended, through direct legislative appropriation, to stimulate educational progress. The amount of such aid depends in every instance on the character and amount of educational work accomplished, the preparation of the teachers employed, and the kind of school equipment.

For the ensuing year every State high school will be entitled to \$2,200 of such aid, and every graded school will get \$750. In Minnesota a State high school is any school that offers four years of high-school work and employs at least eight regular teachers. A graded school is defined as one that offers all the work covered by the first eight years in the public-school system and employs at least four teachers. In case a graded school offers at least two years of high-school work and employs two additional teachers, it is entitled to an added \$500 in State aid.

In addition, special aid is offered for industrial work, for teacher training, as inducement for consolidation or association, and also to the semigraded and ungraded rural schools. The term "industrial work" is used to include agriculture, manual training, and home economics. Schools that offer all of these subjects are entitled to annual aid in the sum of \$2,500, besides the regular aid mentioned above. Those that offer agriculture and either one of the other subjects receive an aid of \$1,800.

Schools that are consolidated under the Holmberg Act may receive aid ranging from \$750 to \$1,500 annually, according to the size of the area embraced in the district. Village and town schools that associate with themselves a certain number of outlying rural districts for the purpose of taking advantage of agricultural and other industrial instruction may, in addition to the above, receive \$150 for each rural school so associated, and besides this an additional \$50 may be voted to every such rural school. More than a quarter of a million dollars will be expended for the associated schools during the current year.

Table 2 gives the special State aid available to public schools since 1900:

TABLE 2.—Special State aid to public schools.

Years.	State high schools.	Graded schools.	Semi-graded schools.	Ungraded rural schools.	Normal training.	Consolidation and association.	Industrial work.
1900.....	\$85,000	\$26,000	\$11,000	\$40,000	\$10,000		
1905.....	267,000	79,000	72,000	120,000	10,000		
1910.....	377,700	116,400	101,994	240,490	21,000		
1911.....	377,700	137,300	150,858	645,617	42,000		
1912.....	381,540	154,300	144,000	465,000	60,750	\$78,250	\$120,000
1913.....	378,000	159,700	121,770	565,449	60,000	119,301	133,646
1914.....	474,151	205,550	132,240	648,017	103,842	167,358	270,640

The greatest weakness in the system.—The Minnesota system of State aid, unfortunately, makes no provision for aiding the poorer districts. At this point it fails to equalize educational advantages.

About \$775,000 is distributed annually among the semigraded and ungraded rural schools of the State. Certain requirements are made in regard to school equipment, length of school year, and teacher preparation, before such direct aid—which ranges from \$75 to \$150 per year—can be granted. Under the present law, whatever funds may be needed by the school district above what will accrue from the first four sources of taxation mentioned above, must be provided by a local tax not to exceed 15 mills on the dollar. Here is the real difficulty. Many of the sparsely settled districts in the northern woods, with their comparatively low valuation, are unable to meet the State requirements for aid, even though they vote the limit of 15 mills. On the other hand, the older wealthy districts in the southern part of the State may obtain the highest State aid by voting a very small additional tax—perhaps a mill or two—on their very high valuation. This condition of inequality is regretted by Minnesota schoolmen, and will, no doubt, soon be remedied.

A variety of units of school organization.—Minnesota presents an interesting study in school organization. Throughout the central and southern parts of the State the small districts with their one

and two-teacher schools prevail. These can not, under the law, embrace less than 4 square miles of land, and few of them exceed 9 square miles. Some of the small schools are well built and well taught, but many are inefficient, and can do little or nothing toward improving modern agricultural life. They are the least satisfactory schools in the entire system.

Several northern counties contain very large school districts that have been able to resist the temptation to subdivide into many smaller units. Some of the districts are surprisingly large. One in Itasca County, for example, embraces 62 townships or 2,232 square miles, an area larger than Delaware and twice the size of Rhode Island. The district has 60 outlying schools, besides schools in several villages and good-sized towns. The whole district is so thoroughly organized and school advantages are so uniformly administered that this form of school organization has proved vastly superior, in most ways, to the small one-school unit. One school board of three men, together with a professional superintendent and his assistants, supervises all education within the district.

Certain portions of north Minnesota, notably St. Louis County, still contain some so-called "unorganized territory." All such territory is, by law, vested in a county board of education for educational purposes, and the county superintendent is clerk and executive of this board. This means that schools are established wherever needed and of the kind needed, by the county board and county superintendent, with funds voted from the county at large. Where the superintendent is a man of good executive ability and force of character this system, too, proves very satisfactory. It tends to give the poor, remote communities as satisfactory educational advantages as others.

Associated schools, or schools of the trading center.—As suggested by its name, this form of organization contemplates bringing about an intimate relation between a centrally located village or town school and all the small rural schools within the radius of its trading community. Under this organization the outlying districts retain their local organization and the control over the home school. At the same time a new board—the associated board—representing all the outlying schools and the central school, is organized to look after the common interests of the association of schools. This system provides adequate supervision for all the rural schools, as the superintendent of the central school is held responsible for the work done in the associated schools. The services of the industrial teachers of the central school are also extended to the rural schools, so that the latter, in a manner, become parts of one complete system, all centered in the village school. School association is often the first

step in the direction of consolidation with the central school. The system of trading-center schools has proved generally satisfactory.

Rapid progress in school consolidation.—Prior to 1911 only nine consolidated districts had been organized in the State. In the spring of that year the Holmberg Act, which provides a new and more liberal law for the consolidation of schools, went into effect. Under it 107 additional communities have effected consolidation. The progress of the movement to reorganize the schools is especially strong in the northern part of the State, where the small districts have never had a very strong hold upon the people. The schools are centered usually either in the open country or in rural-minded villages. Of such schools receiving aid, for the year 1911-12, under the Holmberg Act, 13 were in the open country and 17 in villages. In any case no school can secure State aid for industrial purposes that does not own or have a long-time lease on at least 5 acres of land for experimental purposes. No consolidated school comprising an area of less than 12 square miles can draw State aid under the above-mentioned act.

Growing interest in a larger unit of organization.—Minnesota is no exception to the large number of States in the Middle West that are beginning to seek ways and means to attain a more satisfactory unit of school organization than the prevailing small district. Such small territories, it is readily understood, can not maintain strong farm schools, but the plea for local democracy and home rule has usually been sufficient to block the plans for progress in consolidation. On the other hand, Minnesota has the significant example of what has been done for consolidation and centralization in the large undivided districts and unorganized territory in the northern part of the State. The larger the unit, apparently, the easier it is to consolidate the schools.

Experience in Minnesota seems to point to the county as the natural unit of school organization wherever it is the unit for civic administration. The Minnesota advocates of this system would elect a nonpartisan board of education of, for example, three members, from over the county at large, or by election districts—three or more in the county, according to the size of the board. This board should then choose a professional superintendent for a term of years, who might be held responsible for the selection of competent teachers and for the general management of the schools. Under such a system the old district lines would drop away and educational advantages be equalized over the county. Schools would be elected wherever needed and abandoned where no longer required. Some small schools would probably continue to persist, although the tendency would be toward consolidation into strong, efficient systems.

Minnesota successful in fitting the rural schools to the needs of the open country.—It is of little avail to consolidate or associate the schools for country people if merely gathering children together is the end of the reform.¹

Minnesota is an agricultural State and appreciates the value of a system of schools organized to prepare scientific agriculturists and men and women of right vision to take their places in community affairs. The laws providing for consolidation and association and for the several kinds of State aid all aim at fostering real rural schools. The consolidated schools extend their educational opportunities to young and old alike. They have, first, the regular courses for the boys and girls of school age. They also make it possible for young people who for good reason can not attend school regularly to take valuable short courses, or even, in some instances, evening and correspondence courses. Some of the schools have short courses for the parents. Of greatest importance are the socializing activities resulting from these consolidated schools. Mr. E. M. Phillips, formerly rural school commissioner for the State, says:

Already the principals in the various schools are arranging for boys' and girls' clubs, farmers' clubs, women's clubs, lecture courses, debates, exhibits, contests, agricultural institutes, social gatherings, potato and corn growers' and stock breeders' associations, cooperative marketing, and numerous other activities suggested by local conditions. The possibilities in this direction seem unlimited. Experience indicates that with direction and encouragement upon the principal's part, the school easily becomes the community center for all desirable cooperative activity. The larger interests, the wider scope and possibilities revealed in dealing intimately with more people engaged in a common cause, the exchange of social courtesies, all tend to broaden the outlook of patrons as well as children. Neighborhood differences, including petty quarrels and feuds, are lost sight of in the thought, and living is rounded out with contentment and a new hope. This is not visionary. Thus early in the movement the tendency to improve conditions for life in the country is asserting itself in consolidated school communities.

II. WORK OF THE LARGE UNDIVIDED SCHOOL DISTRICTS.

How the large districts are organized.—The large northern counties of Minnesota have for the most part only recently emerged from the great forest. Some sections are yet in the hands of the lumberjacks, although large areas are already leaving the "cut-over-land" stage and are developing into excellent grain and dairy farms. While a county remains unorganized educationally the entire area of the

¹Some time ago the writer visited a fine, well-built consolidated school in a certain State of the Middle West. The school was reared in the midst of an ideal environment of field and forest, and yet the course of study did not permit one to believe that it was intended for rural folk needing to be set in harmony with their own daily environment. Full courses in Latin and German prevailed, with optional courses in French; no attention whatever was paid to nature and the soil.

territory is administered by a county board of education, of which the county superintendent is clerk and has the practical management of school affairs. As soon as this board of education may deem advisable—a matter dependent upon growth in population, increase in wealth, etc.—it may by due process of law set off separate common-school districts from the unorganized area. The State law encourages the organization of such territory into large units by granting to districts embracing 10 or more townships all the powers of independent school districts. Occasionally these large units become subdivided into several smaller districts; but, on the whole, the administration provided by law is so satisfactory that many large districts have continued intact for years, until at the present time it is quite common to find within them several good-sized villages and scores of outlying schools administered by one educational board of three members.

A businesslike administration.—The success of these large and often topographically unwieldy districts lies in the businesslike way with which their affairs are managed. In the first place they have a central board of education, comprising three members, elected from at large over the district at the regular November elections for three years each. These men are expected to devote much time to school affairs, for which they receive good compensation. The compensation depends on the size of the districts, ranging from \$200 a year where the districts contain 30 schools to \$800 a year where there are 91 schools or more. In addition to their salaries, the members of the board are "paid their actual and necessary traveling expenses incurred and paid by them in the conduct of their official duties, including their visitation of schools."

The executive powers of the board are vested in a professional school superintendent appointed by the board for a term of years. Some of the strongest school men in the State hold these responsible positions—and responsible they truly are, for the superintendents are charged with the enforcement of the school policy for the entire area, both as to main purpose and smallest detail. From the central school where his offices are—usually in the largest village in the district—he and the board plan for the schools. From this point the superintendent supervises as many of the schools as he can. What he is unable to do in person for lack of time is done by his assistants, particularly the teachers of agriculture, manual training, home economics, and music, who make the rounds of the rural schools, and who often in their turn have further assistants. This plan works for close, intelligent, and helpful supervision.

Because it might be difficult at all times for the central board to know the educational needs of each part of the district, the law pro-

vides that in districts containing 20 or more townships the annual school meeting shall elect a local township superintendent for each congressional township, who receives a reasonable compensation for his work. The duties of the local superintendent are many and varied. The statutes contain the following:

The town superintendent shall advise the school board in regard to the location, erection, and repair of school buildings, the improvement of school sites, the employment of teachers, the furnishing of school supplies, and all other matters relating to the schools in the town. He shall look after truants, visit the schools, attend meetings of school officers called by the county superintendent, report from time to time to the school board the condition of schools in his town, with such suggestions in regard to their improvement as he may deem proper, and, when authorized by the school board, make contracts for fuel and other necessary supplies for the schools in his town, and for ordinary repairs for the schoolhouses.

How the system works in practice.—The large districts are marked by a varied community life. The same district may have sections rich in iron ore and prosperous agricultural areas, while its borders may be marked by almost unbroken forests or new clearings and scattered cabins. This would mean every degree of prosperity and poverty. To equalize matters so as to give the most recent "squatter" all the educational advantages of the established lumber king is the working problem of the central board of education.

It will be recalled that this board is not hampered by local district lines or well-established community democracy. The board has complete freedom to build from new beginnings. The members study, first of all, the financial needs of the district for the ensuing year; then make up their budget and vote the necessary tax, which is levied on the total assessable property of the district. Since the district has all the powers and duties of an independent district, the rate of taxation is not as limited as with the ordinary common-school district. If a logging camp needs a temporary school, a portable schoolhouse is erected and a well-trained teacher placed in charge. If a given school has dwindled in size, the school is abandoned and the children are transported at public expense to the nearest school. Wherever or whenever it is deemed expedient, consolidated schools are organized and industrial courses added. A State high school is usually established in the largest town, and such pupils as live at a distance of not more than 5 miles from the school are conveyed daily to and from the school. Whenever the pupils live too far from the central school to take advantage of the transportation wagons for high-school purpose; the school board must provide their guardians with a sum of money sufficient for boarding and lodging the children while they are in high-school residence.

The small rural schools are provided with uniformly well-trained teachers, with adequate and uniform equipment of apparatus and

books; and, usually, they have suitable terms of school—longer, as a rule, than in the smaller districts found elsewhere. In this way the children who live far from town and older settlements are not neglected, but are given every opportunity to take their place with the best-educated citizens of the State.

The story of school district No. 1, Itasca County, an illustration to the point.—This unusually large district contains 62 congressional townships, or 2,232 square miles. It has a total length, north and south, of 60 miles, and is 63 miles in breadth at its widest point of measure. The land is of glacial formation, and is cut by hundreds of large and small lakes. Much of it is still in the original pine and hardwood forest. The southern third is making great headway in clearing up the "cut-over lands" and is rapidly becoming a prosperous agricultural region. Roads are being cut at considerable expense

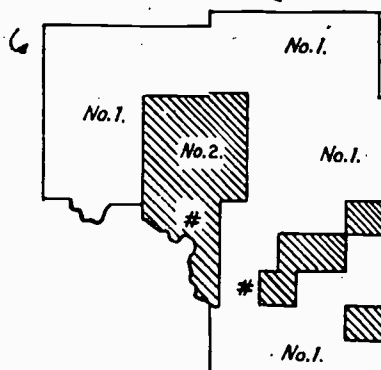


FIG. 1.—Map of Itasca County, Minn.

through the forests in every direction. Four railway lines penetrate sections of the district, along which the large town of Grand Rapids and the smaller villages of Cohasset, Blackberry, Verna, Warba, Swan River, and Wawina have grown up. The schools of all these places, and threescore others in the open country, are being managed most successfully by one board of education, comprising three men and one expert superintendent, who has the assistance of a corps of professional helpers.

(a) *Remarkable cohesion of parts.*—One would naturally expect that the towns and the open country might try to pull apart and establish districts independent of one another, or, at least, that each town or village would insist on its own independent organization. Thus, for example, Grand Rapids, with a population of 2,500 people, has the central high school of the district, while Cohasset, with a population of 800, has only a graded school. The latter town seems to have no desire to establish a district of its own, however, since its

interests are the interests of the entire district, and the town really has all that it can wish in educational facilities. The district has erected here a \$40,000 building for the eight grades, including an excellent equipment for domestic science and manual training. All the children of high-school grade are conveyed daily in comfortable wagons to the high school at Grand Rapids. The latter affords far better facilities than Cohasset would be able to offer, were it to operate its own high school. What is true of Cohasset is true of the other railroad towns in the district. Educational advantages are so equably distributed that any local jealousies or differences that may at times have arisen have never shown sufficient strength to bring about the disruption of a highly satisfactory system.

(b) *The Central High School at Grand Rapids.*—Grand Rapids has the central high school of the district and also two good graded schools. The former is a State high school of the first class and is housed in a well-equipped building set in ample grounds. The school offers exceptional work in agriculture, domestic science, and manual training, and has a training course for rural teachers. The graduates from the teachers' course are in great demand for the outlying schools of the district. Indeed, it becomes possible for the superintendent, under whose eye they are prepared, to place all the graduates where they will best fit local conditions and accomplish the most good.

Every child of school age in the district who has completed the work of the eighth grade is entitled to all the advantages offered by the central high school. All children living within a reasonable distance of the school are conveyed thither at public expense. Nor are the children who live at a greater distance from Grand Rapids neglected. The school district pays \$7.50 a month toward defraying the living expenses of every such pupil while in school residence.

The central high school offers most thorough industrial courses, and, in addition, an interesting short course of 10 weeks during the winter months for young men and women who can not regularly attend during the school year.

(c) *Teachers, length of school year, salaries.*—There is no better way, perhaps, to convey to the reader the main facts of teacher preparation, length of school term, school enrollment, and salary, in district No. 1, than to reproduce here in detail a table containing all these facts for every one of its 60 rural schools. It will be seen that no teacher has less than a second-grade county certificate, which demands as a prerequisite five months' successful experience as a teacher. Every school in the district, without exception, has a nine months' term—a remarkable condition for a new and only partly developed country. The school enrollment in some of the schools is very



A. TYPE OF SMALL ONE-TEACHER SCHOOL IN THE NEW CLEARINGS.

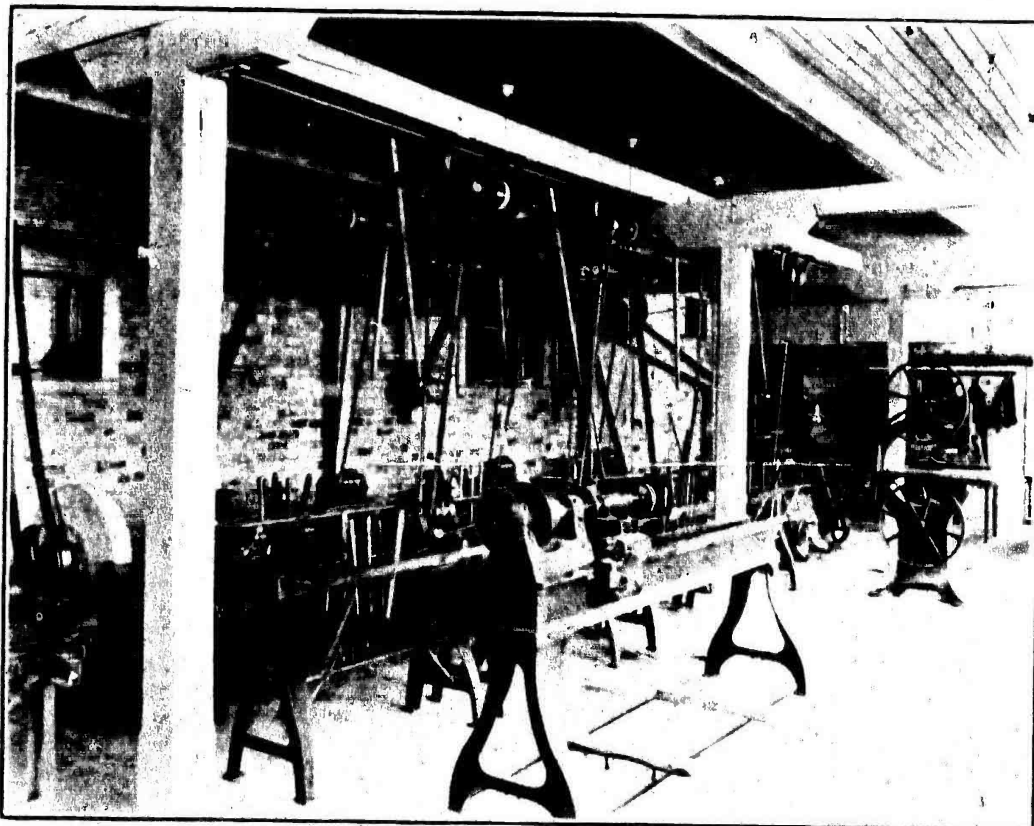


B. CONSOLIDATED SCHOOL, DEER RIVER, DISTRICT NO. 2, ITASCA COUNTY.



A. SCHOOL FARM IN CONNECTION WITH THE DEER RIVER CONSOLIDATED SCHOOL.

The school wheat field is shown in the foreground.



B. WORKSHOP IN A GOOD CONSOLIDATED SCHOOL IN NORTHERN MINNESOTA.



A. MODEL ONE-TEACHER SCHOOL IN DISTRICT NO. 2, ITASCA COUNTY.

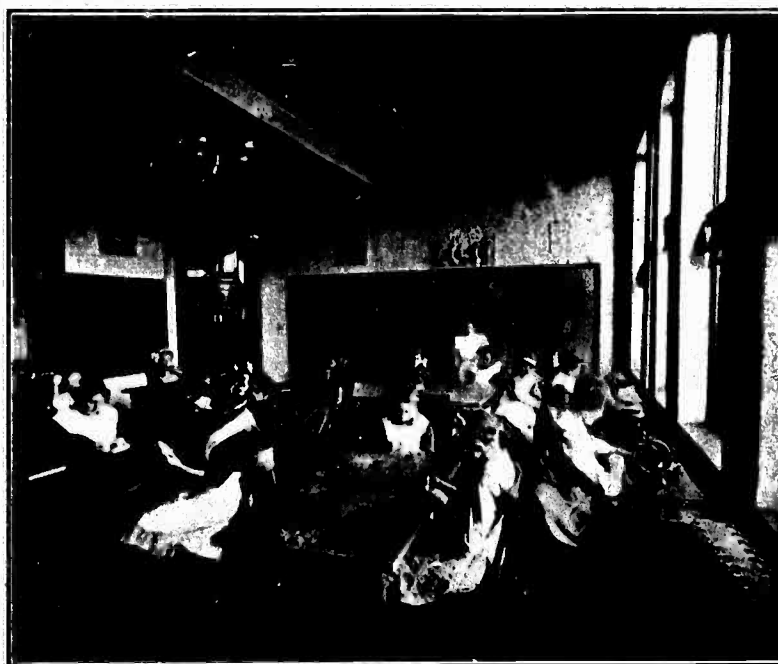
This is modern in every respect and is well equipped to do industrial work.



B. A PORTABLE SCHOOLHOUSE IN A NEW LOGGING CAMP OF ITASCA COUNTY.



A. TWO-ROOM RURAL SCHOOL IN THE ITASCA COUNTY CLEARINGS.



B. SPRING VALLEY ASSOCIATED SCHOOLS.

Girls from the outlying districts assembled at central school for their Friday afternoon sewing lesson.

small. This is accounted for by the sparsity of population in the newer clearings. No teacher receives less than \$47.50 per month. On the whole, the showing is very satisfactory.

School district No. 1, Itasca County.

Schools.	Grade of certificate.	Prob-able enrollment.	Teacher's salary.	Schools.	Grade of certificate.	Prob-able enrollment.	Teacher's salary.
Allwood.	First.	9	\$52.50	Max.	First.	28	\$50.00
Arbo.	First.	17	53.00	Nelson.	Second.	7	47.50
Balsam Lake.	First.	19	52.50	Ottum.	First.	9	52.50
Bearyville.	First.	20	52.50	Orth.	First.	6	52.50
Bear River.	First.	25	47.50	Pine Top.	First.	6	52.50
Bergville.	First.	25	52.50	Rahier.	First.	20	47.50
Big Fork.	First.	40	67.50	Reed Lake.	Second.	12	53.00
Do.	Second.	28	53.00	Round Lake.	Second.	20	47.50
Blackberry.	Second.	30	75.00	Shallow Pond.	Second.	8	52.50
Do.	Profes- sional.	25	50.00	Sand Lake.	First.	6	47.50
Bustleoggin.	First.	19	52.50	Shoal Lake.	First.	9	52.50
Cowhorn.	Second.	8	47.50	Spithand.	First.	7	52.50
Carpenter.	Second.	30	52.50	Spruce Park.	First.	8	52.50
Carlson.	Second.	10	47.50	Squaw Lake.	Second.	30	52.50
Cunningham.	First.	22	52.50	Swan River.	Second.	10	50.00
Delap.	Second.	16	47.50	Sizer.	First.	12	52.50
Dunbar Lake.	Second.	14	50.00	Sturgeon Lake.	First.	8	52.50
Dona Lake.	First.	10	55.00	Smith.	Second.	2	47.50
Frestone.	First.	8	52.50	Togo.	Second.	18	47.50
Erwin.	First.	12	52.50	Tichnor.	Second.	15	47.50
Greenfield.	First.	12	52.50	Thorofare.	Second.	8	47.50
Hayden.	Second.	5	47.50	Wawina.	First.	18	55.00
Harrington.	First.	24	52.50	Warba.	First.	25	70.50
Hanson.	Second.	8	47.50	Do.	First.	30	55.50
Haupt.	First.	28	52.50	West Fork.	First.	28	52.50
Horton.	Second.	18	47.50	Wetle.	Second.	6	47.50
Moose Park.	Second.	7	50.00	Wirt.	Second.	6	50.00
Mc'ormick.	First.	4	52.50	Deer Lake.	First.	8	52.50
McKinley.	First.	16	55.00	Trout Lake.	First.	20	61.00
McIntire.	First.	20	52.50	Do.	First.	28	52.50

The teachers of the village graded schools and the central high school have, most of them, professional or special certificates. The length of school term in these schools ranges from 9 to 9½ months. The salaries paid are also high. The industrial teachers, on whom falls a part of the responsibility of supervising the work of the rural schools, receive from \$1,000 to \$1,500 each.

(d) *System of school equipment.*—The great advantages of a strong central system can be seen in the manner of equipping the 60 rural schools of the district for their work. Each schoolhouse has a standard equipment of adjustable single seats, modern bookcases, drinking fountains or earthen jars and individual cups, clocks, charts, maps, etc., and a well-chosen library. Besides this, all manner of working material, as raffia, rattan, materials for weaving mats, woolen yarn, and plasticine, as well as all textbooks, paper, ink, and pencils are furnished the pupils free of charge.

The district purchases all its supplies, which are kept in storerooms at the central school until requisitioned by the teachers of the several

schools. Everything is purchased by an experienced educator, who buys nothing but the best. He and his assistants choose and send out the libraries to the rural schools, which is a guarantee that they will contain good wholesome reading.

(e) *How the schools are linked together.*—The work of the outlying schools is largely outlined and directed from the central school. This is especially true of work that deals with exceptional phases of community education, as patriotism, home sanitation, local recreation, etc., and it is encouraging to know that the schools find time for this kind of local leadership. Other work under the direction of the teachers from the central school is, of course, agriculture, manual training, and home economics. Teachers from the central school spend much of their time in the rural schools, or they have perambulating assistants who are charged with these duties. Typewritten lessons in industrial subjects are sent out to the schools from time to time or it may be "Some experiments with plants and soils" or similar theories. Later come "follow-up" sheets asking the teachers pertinent questions, which tend to keep them on the alert and interested. Of other lessons sent out the following are suggestive titles: "Itasca County geography outline," "The teacher's duty to stimulate patriotism," "School lunches as subject for thought," "Outline of sewing for rural schools," and "Teachers and their instructions in regard to local poverty and disease."

Some interesting phases of school work in district No. 2, Itasca County.—Itasca County, with its area of 3,000 square miles, contains only five school districts. Of these, two comprise exactly one township each, and another nearly three townships. The Grand Rapids District, with its 62 townships, is the largest of all. District No. 2—otherwise known as the Deer River District—has an area of 470 square miles.

In organization and purpose these five districts are very similar. It is therefore unnecessary to go into details of the work done in all of them. A few things of special interest from a study of the Deer River District will suffice.

(a) *Spirit of enterprise.*—The investigator invariably gets the feeling upon coming in contact with the school boards and superintendents in these large districts that here is an organization for school purposes which utilizes all the business enterprise and aggressiveness that mark other large American commercial and industrial enterprises. These school boards receive a remuneration for their labors sufficient to make them look upon their school duties as a part of the day's work, rather than as something incidental and belonging to odd moments. At any rate, a marked spirit of aggressiveness and liberality is found

in all these large districts, yet this system of organization is more economical than the other, because it is more thoroughly organized.¹

(b) *A complete school equipment.*—The outlying schools of the Deer River District are well planned. Apparent exceptions to this statement are found in a few places where portable houses have been erected to answer the temporary needs of some new logging community or settlement. The schoolhouses are well built. They are invariably correctly lighted. Each of them is equipped with a modern heating and ventilating system, with bubbling fountain, two good manual-training benches and tools, and some with oil stoves, ovens, and all necessary cooking utensils. All books and working materials are furnished free of charge.

(c) *Supervision and extension work.*—The superintendent and his assistants hold frequent community rallies at the schoolhouses, where local problems are discussed. Once a year the farmers and their wives are invited to attend a two-day short course at the Central High School at Deer River, when dinners are served free by the domestic science department of the school.

The instructor in agriculture spends a large part of his time in visiting rural schools, outlining the work in agriculture, and in advising with the farmers of the district. In a similar way the manual-training instructor makes the round of the rural schools, spending a half day at a time giving instruction in handwork.

(d) *The central high school.*—This school is located at Deer River, a village of 1,500 people. It is a thoroughly equipped school, having a modern central building and a separate building for manual training and forge work. A large school farm adds materially to the physical equipment. The school is consolidated under the Holmberg Act, and conveys children to school from over an area of a five-mile radius. It further receives aid as a State high school and for maintaining industrial work in agriculture, domestic science, and manual training. Children of high-school preparation, living beyond the transportation limits, receive \$2 per week to apply on their living expenses.

(e) *Night short courses.*—The central school offers a series of practical night courses 1 night weekly for 10 weeks. This is in addition to the regular industrial work, and is intended particularly for the grown people in or near Deer River.

¹ The following is an illustration in point: When the writer and a half dozen associates were studying Deer River District as guests of the community, meetings were arranged and school board members and other educators from adjacent districts were invited to be present. These meetings were for school business and not for entertainment, however. The domestic science department of the central school was given an opportunity to show that the pupils knew how to cook, by preparing dinner for a party of 20 people. A special train was chartered by the school board over the Minneapolis & Rainy River Railroad, which penetrates the district from north to south, in order that the guests might reach the largest number of rural schools in the short time at their disposal. This train stopped at the logging sidings whenever handy to some rural school and finally pulled up near a logging camp where a hearty dinner was waiting.

III. ASSOCIATED SCHOOLS, OR SCHOOLS OF THE TRADING CENTER.

A successful compromise in school centralization.—In many communities the common practice of consolidating small, ineffective rural schools into strong central plants is objected to as doing violence to time-honored ideals and traditions. Because of this feeling the weak, one-teacher schools have, in many places, continued to persist in the face of repeated efforts at consolidation. The proposed remedy has seemed too radical and has been voted down.

Minnesota has at this point worked out a compromise that has proved satisfactory to all concerned. This is the so-called associated schools, or schools of the trading center.

A rural trading center, speaking generally, embraces the central village, with its various emporiums of trade and exchange, and all the surrounding country that can conveniently use the village as a clearing house for its agricultural products and as a social recreation center. The schools of such an area, including the central village school and some or all of the outlying rural schools, may by law associate themselves for mutual educational purposes. The striking feature of this system is, as already indicated elsewhere, that all the districts that enter into the association retain their independent organization for local purposes, including the general control of the home school. At the same time they become merged into one large district—the associated district—for all matters of common educational interest. The school officers of all the associated districts, three members from each, form a board with authority to levy a special tax for associated purposes. In addition to this there is formed an associated board comprising the six members of the village board and one member each from the associated districts. The duty of this board is to manage the affairs of common interest, such as disbursing the funds voted by the larger board and employing the special instructors in industrial subjects provided by law.

The Putnam Act and school association.—The Minnesota form of school association was made possible by the provisions of the Putnam Act, which has revolutionized school work in the public schools of the State. This law provides, primarily, liberal aid for instruction in agriculture, manual training, and household economics in certain high schools and graded schools. . But, secondly, it makes provision whereby rural schools may become associated with an adjoining high school or graded school in order that the rural schools may receive the benefits of these industrial subjects on equal terms with the village schools.

A few of the more important sections of the Putnam Act read as follows:

SEC. 6. For the purpose of extending the teaching of agriculture, home economics, and manual training to pupils in rural schools, and for the purpose of extending the influence and supervision of State high or graded schools over rural schools, one or more rural schools may become associated with any State high or graded school maintaining a department of agriculture, whether or not such high or graded school has been designated by the State high-school board to receive aid under the provisions of this act. Any such State high or graded school shall for the purposes of this act be known as a central school.

SEC. 7. To effect this, proceedings shall be had by petition and election on the part of the rural school or schools as now provided by law for the consolidation of school districts, and ballots to vote upon this question shall read:

To associate with Dist. No. — for the teaching of agriculture and manual training—
Yee— No—. The district or districts casting a majority vote upon the approval of such association by a majority of the school board of the central school become so associated, and the rural school or schools, together with the central school, shall thereafter be known as the associated schools of — for the teaching of agriculture and manual training.

SEC. 9. The school board of each rural school district associated with a central school under the provisions of this act shall designate one of its members by vote to act with the school board of the central school in carrying out the provisions of this act as to the teaching of agriculture, domestic economy, and manual training in such schools, and in all matters pertaining to such instruction, both in the central school and in the associated rural schools, such member shall have equal power with the member of the school board of the central school.

SEC. 10. The principal or superintendent of the central school shall have and exercise the same authority and supervision over the rural schools as over the central school. He shall prepare for the associated rural schools a suitable course of study embodying training and instruction in agriculture and such subjects as are related to farm life and can be successfully taught in rural schools.

SEC. 11. The relationship and obligations between the associated rural school or schools and the central school may be terminated at any annual school meeting by a majority vote of the associated districts, but not until the central school has had at least one year's notice of the intention to vote on the question.

General advantages of school association.—The system established by the Putnam Act provides adequate supervision for all the rural schools, since the superintendent is charged with responsibility for all the work done in the associated schools. The industrial teachers are employed by the associated board for all the schools, and while their work centers in the village high or graded school they must direct the industrial subjects in all the schools.

Such a system when fully developed embraces many activities, all directed from the central school. It may include: (1) The central school, having the usual eight grades and a four-year high school; (2) as many locally independent schools as there are districts in the association; (3) well-organized industrial courses, including a variety of short courses; (4) an experimental plat or farm of five or more

acres; (5) agricultural extension work, usually in conjunction with the State College of Agriculture extension division; and a local training school for rural teachers.

This kind of organization makes possible a real community school. It goes far beyond ordinary schoolroom practices and utilizes all the great out-of-doors. It combines the resources of town and country to the end of harmonizing townfolk and country folk, enabling them to realize that they are members of one common body who must work together in harmony to mutual ends.

Ex-State High-School Inspector George B. Aiton, who has himself taken a large part in school association, has this to say about the advantages of the Minnesota plan, as exemplified by the Cokato Association, which is known as one of the most satisfactory in the State:

1. The problem of rural schools is solved, at least for this community. Teachers, texts, courses of study, and methods of instruction are brought under expert supervision.
2. A supply of rural teachers is established. These teachers, who have been trained in the central school, go back and forth familiarly and are in as close touch with the superintendent as are the grade teachers of the village.
3. Agricultural instruction is brought to the farmer's door. The organization of from one to half a dozen such schools in each county—no distant daydream—is far ahead of a sparse system of schools, such as one for each congressional district.
4. The plan is economical. Present buildings are utilized and the ordinary high-school teachers are able to do the academic part of the work.
5. By combining the resources of town, county, and State and by avoiding duplication, competent instructors may be employed.
6. Class education—and this is no trifling matter—is avoided.
7. The town school is improved by the attendance of country students, and country students are improved by mingling with town students.
8. A long step has been taken to solve the problems of rural life. The influence of a cooperative school will be exerted, not only in favor of greater productivity and of cooperation in marketing, but in favor of improved roads, speedy transportation, reasonable hours of work, and increased pay. The upshot of it all can not fail to be more homes of thrift and contentment.¹

A concrete illustration.—Spring Valley is a village of 2,000 people, situated in a rich farming community in the southeastern part of the State. The people are noted for thrift and conservatism. In spite of the latter the past four years have seen marked changes in the system, especially so since the adoption of the policy of association, which, according to Supt. F. E. Maxon, who was instrumental in organizing the system, has wrought great things both for the town and near-by country.

(a) *Central school and farm.*—A modern high-school building was erected three years ago and equipped for industrial work—agriculture, manual training, and household economics. This enabled the school

¹ Pamphlet reprinted from *The School Review*, Vol. XX, No. 2, February, 1912.

to draw annual State aid of \$2,500 under the Putnam Act. At the present time three large rooms are used exclusively for agriculture work, two large rooms contain the manual training and forge work, and two are equipped for domestic science. It is interesting to note that of the 200 students of high-school grade pursuing the industrial subjects more than 50 per cent are from the associated rural districts. This speaks volumes for the influence of the system in keeping the rural children in the small schools and "pointing" them for the central school.

The school maintains a farm of 16 acres in a high state of cultivation. The produce from this farm has, year by year, sold for more than enough to pay all running expenses. All agriculture students are expected to learn the practical phases of the subject, doing work on the farm.

(b) *Beginnings of association.*—In 1911, 20 rural districts were invited to associate with the central district for industrial purposes under the Putnam Act. Fourteen districts voted for association, seven by unanimous vote. No district has ever expressed a desire to withdraw from the association, and others which at first refused to enter have made request for admission.

(c) *Work of supervision and cooperation.*—The superintendent makes an effort to reach each school at work and consult the teacher about the general school work. Regular reports are expected from all rural teachers, and from time to time they are called to the central school to consult with the industrial teachers. The latter also make regular rounds of the outlying schools and send each teacher type-written lesson-guides for the daily industrial work.

Each district is provided with uniform textbooks and school equipment at cost. This means uniformity and great saving. So well has the plan worked that nonassociated districts are seeking to get their books and equipment through the office of the association. In all schools where there are two or more boys over 10 years of age a double bench and sets of tools are placed—providing the district agrees to pay for the lumber used. The benches and tools remain the property of the association and can be transferred from one school to another according to the need. Likewise, where there are two or more girls old enough, and the board agrees to furnish the supplies, a two-burner kerosene stove, oven, and complete cooking outfit are placed in each rural school making the formal request.

(d) *Rural pupils at the central school.*—During three months in the fall and two in the spring, pupils 10 years of age and over spend Friday afternoon of each week at the central school, engaged in industrial study. The agriculture teacher meets all the pupils for 40 minutes in agriculture work; after this the boys spend a second hour in the manual training shop under the direction of the manual train-

ing instructor, while the girls are at work in the domestic science rooms. The work begun on Friday afternoon at the central school is expected to be continued throughout the week in the home school, and to be ready for report at the next Friday meeting.

(e) *The short courses.*—The first of these is a three months' course, open to young men and women above 15 years of age. During the past year, 33 students took advantage of the course, almost all of them coming from the open country. Instruction is given in English, farm arithmetic and accounts, civil government and farm sanitation, agriculture, cooking, sewing, carpentry, forge work, spelling, and penmanship.

A junior short course and contest is also an annual feature. At this, liberal prizes are awarded for various exhibits, among which the corn exhibits usually take first place. Special prizes are also offered for the best displays from the rural schools. The local commercial club holds a well-patronized market day while the junior short course is in session.

(f) *The agricultural instructor the local farm adviser.*—The instructor who has charge of agriculture and the school farm acts as adviser to the entire farming community. He holds himself in readiness to plan farm buildings and silos, and often drives long distances into the country to instruct in types of dairy and beef cattle, hogs and sheep, and in a thousand and one ways assists in bettering agricultural conditions.

Occasional night meetings are also held at the outlying school-houses, where farm-life topics of all kinds are discussed.

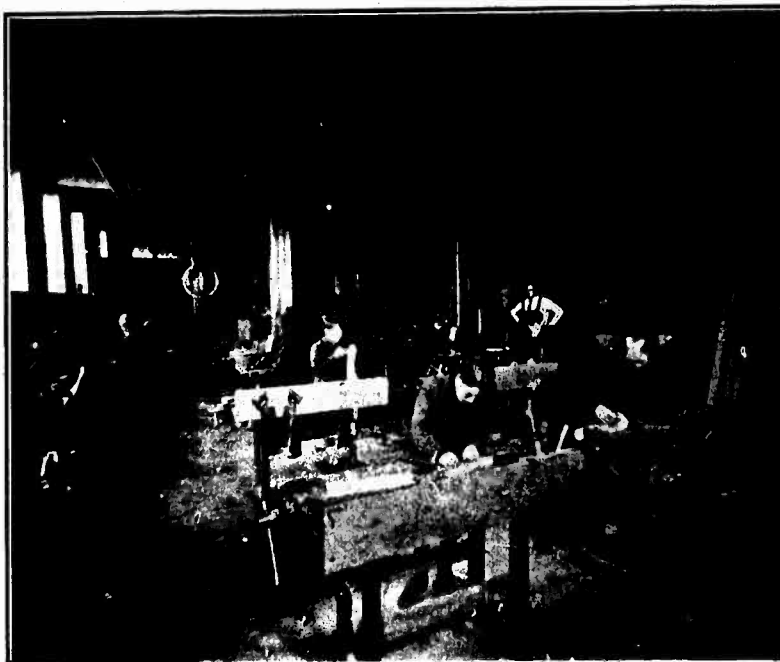
(g) *The cost of association.*—It is of interest to know what the system costs the rural schools over and above the regular maintenance of the local schools. Last year the Spring Valley associated school board paid out the following amounts:

Salaries—5 teachers (2 for 4 months only).....	\$4, 140
Agriculture.....	955
Home economics.....	414
Manual training.....	1, 014
Not classified.....	803
Total.....	7, 326

The above statement includes the purchase of considerable equipment for the industrial departments, but does not include the school farm, which was self-sustaining.

The State paid the associated school board the following amounts:

State aid for the three industrial subjects.....	\$2, 500
State bonus (\$150) for each of 14 districts associated.....	2, 100
Total.....	4, 600

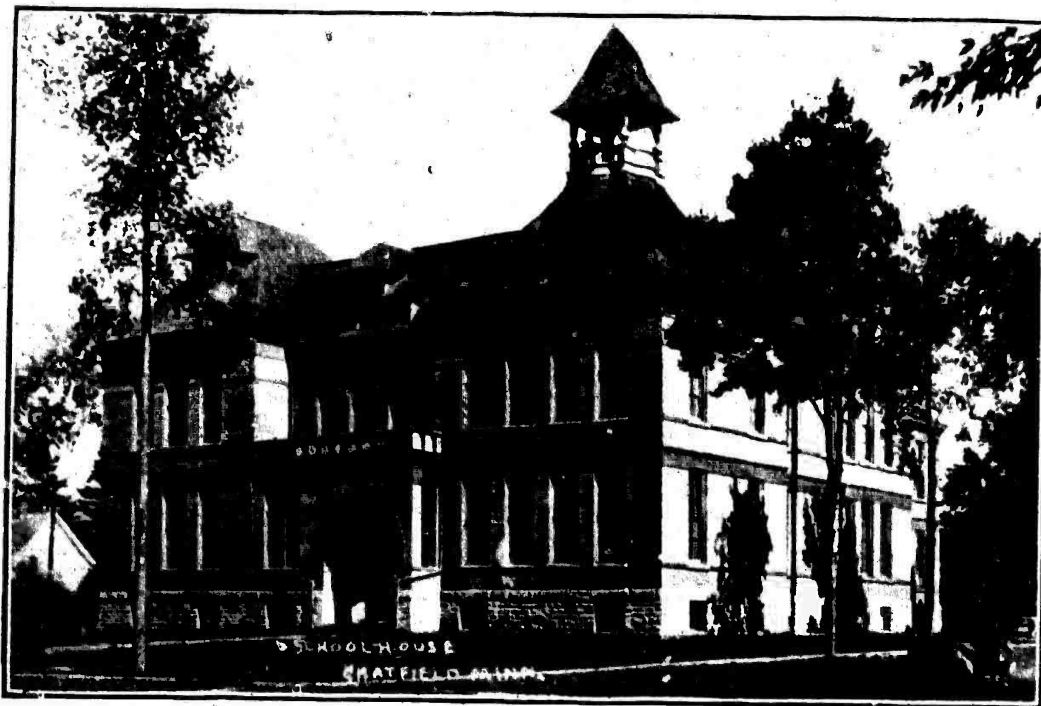


A. SPRING VALLEY ASSOCIATED SCHOOLS.

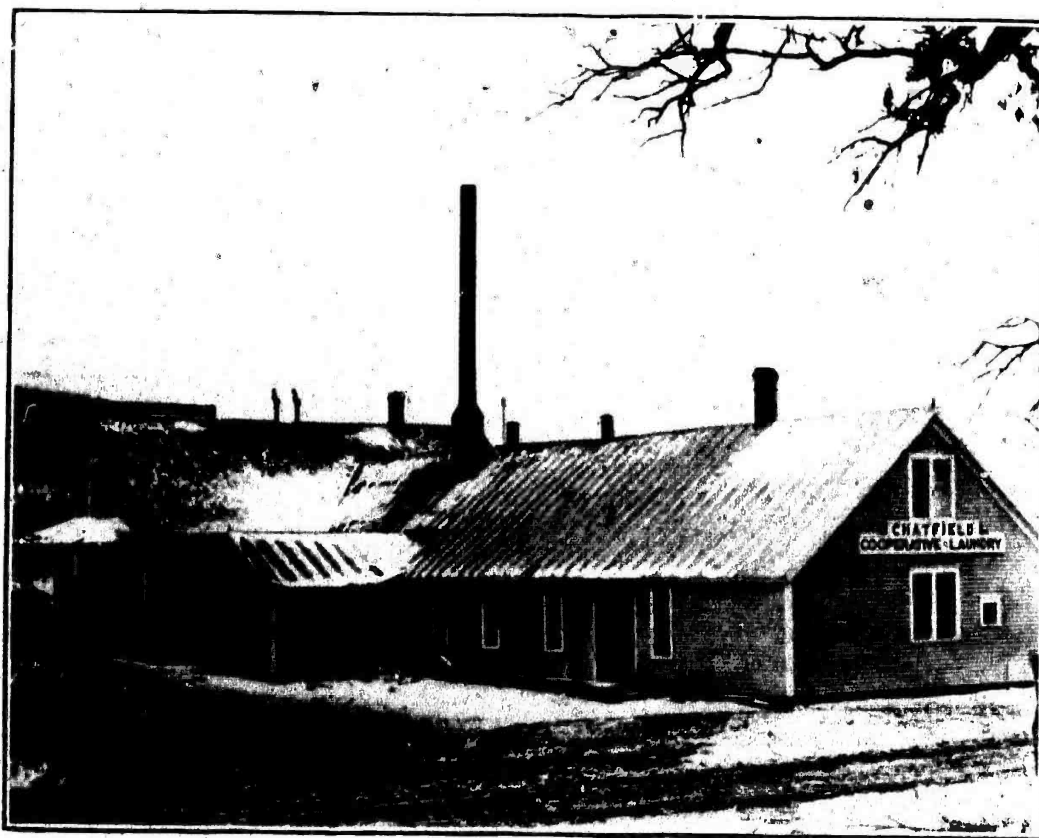
Boys from the outlying districts assembled at the central school for their Friday afternoon manual training lesson.



B. THRESHING ON THE FARM OF THE SPRING VALLEY ASSOCIATED SCHOOL.



A. CENTRAL BUILDING OF THE CHATFIELD ASSOCIATED SCHOOLS.



B. CHATFIELD COOPERATIVE LAUNDRY.

Established for the farm folk largely through the efforts of the associated school.

The one stipulation for State aid is that the associated schools must raise one dollar for each two dollars of State aid. In this case, the sum of \$2,300 would have to be levied on the entire associated district. Two mills on the dollar would be more than enough for this purpose. On this basis what would the average outlying district pay for its share? The assessed valuation of the 14 districts varies from \$32,000 to \$100,000, with an average of \$50,000. This amount at two mills would make \$100—the average cost to each district. Of this amount \$50 is refunded by the State, which, it will be recalled, pays annually \$50 to each rural school associated. Indeed, at Spring Valley several schools paid only about \$10 each, while one or two paid \$100 each. From this one can readily see

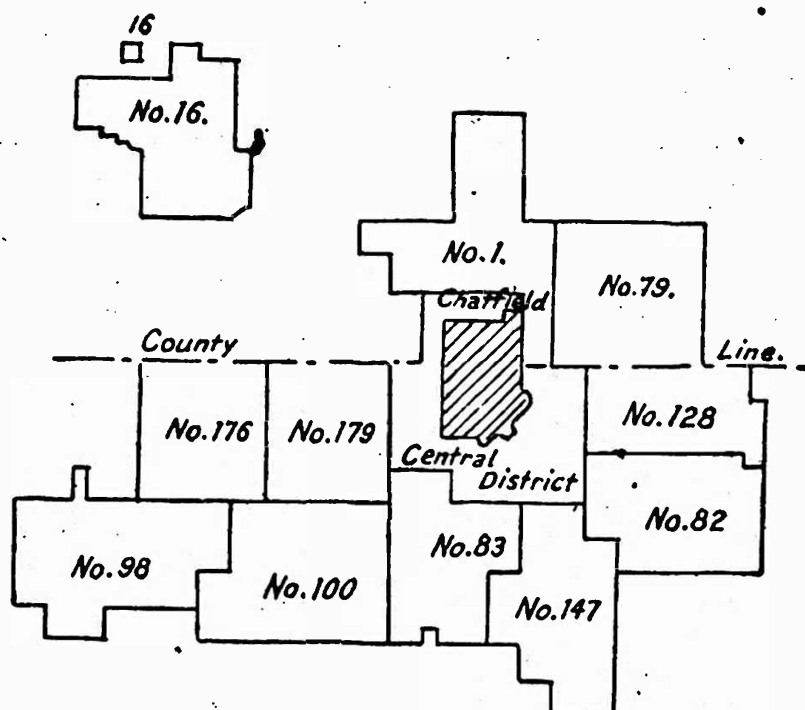


FIG. 2.—Map showing Chatfield, Minn., Associated Schools.

that the system offers many advantages at a surprisingly small final cost.

Chatfield Associated Schools.—Chatfield is another village in southeastern Minnesota, not far from Spring Valley. This school is organized in practically the same way as the Spring Valley school, and makes a strong appeal to country-life activities. The association is organized around a village of 1,300 people, 8 of the rural districts lie in Olmstead County and the remaining 3, together with the central district, are in Fillmore County.

(a) *School attendance.*—Supt. E. B. Forney gives his high-school enrollment for the past year as 114, with a daily attendance of 110. Five years ago the enrollment was only 55 and the average attendance 52. The town of Chatfield has made no growth in this period

of time, so that the increase is almost wholly from the associated districts. The 1914 freshman class had 41 members, 21 of whom live in the country. The children who attend the small schools early become accustomed to consider themselves as members of the central school. This provides enough vital interest materials to encourage them to remain in the small school through the eight years, after which many of them continue the work at the central school as regular students, or, at least, enroll for the annual three months' short course.

(5) *School supervision.*—The Chatfield associated board has the following rules for supervision of outlying schools:

The superintendent shall make as many tours of inspection as his work will warrant, in no case less than two visits to each school annually. The agricultural instructor must visit each school three times, the normal training instructor two times, and the domestic science instructor as often as convenient. This means that each school will receive at least eight visits during the year, and generally many more.

The supervising teacher must file a written report of each such visit with the superintendent, as in the affixed illustration:

Instructor.....	Date 12/16/13.
Hour of leaving Chatfield.....	12. 10
Hour of arrival at school Dist. No.....	1. 00
Number of minutes en route.....	50
Hour of leaving school.....	2. 25
Number of minutes at school.....	85
Conveyance, horse and buggy. Cost, one-half of \$1.25.	
Nature of instruction, if any is given: Demonstration—Capilarity as applied to soils.	
Criticism of school or teacher, if any: Discipline excellent. Word drill in reading and recitation in history were good. Pupils read by pronouncing words, and do not perceive the sentence as a whole. Phrase drill and drill in expression are sadly needed. The only preparation for the new lessons was "Take to—."	

These reports are made the basis of consultation with the rural teachers, who, in turn, must be present at three teachers' meetings a year, at the central school. These meetings include the consideration of all phases of the school work—among other things, the presentation of models in busy work by the normal training instructor. The rural teachers are paid \$1 for attendance upon each of these meetings.

(c) *Course of study.*—The school follows almost in detail the course of study outlined in Bulletin No. 47 of the State Department—Suggestive Outlines for Study Courses in Minnesota High Schools.

The attached report gives an idea of one class in animal husbandry:

Subject, animal husbandry. Year, 1912-13.
 Teacher,
 Texts, Craig: Plumb: Bulletins.
 Weeks pursued, 36. Periods per week, 5.
 Length of period, 40. Number passed, 8.
 Number failed, lab. double. State certificates issued,
 Outline the work of the year as follows: Amount of text covered, with omitted parts mentioned, special methods, field trips, laboratory work, classics read, etc.
 Stock judging: Placed a great deal of emphasis on this phase of the work.
 Used text and charts in preparing the class for practice work in judging of all but cattle. Here I used lantern slides very freely. The stockyards provided more or less material.
 Dairying: Talks and bulletins formed the basis of the recitation work. The laboratory work consisted of work with the separator and a thorough course in milk and cream testing.
 Creamery problems were also taken up.
 Breeds of live stock: Plumb and Craig were used as texts. Only the essentials were studied.
 Poultry: Bulletins used as texts.
 Feeding: Bulletins used as texts.
 Practice in calculating rations.
 Insects: A brief study of the most important facts about insects. Made special study of bees. Took class out to an apiary for demonstration.
 Ventilation of farm buildings.
 Agricultural bacteriology.

(d) *Three months' short course.*—A large number of young men and women above school age took advantage of the course during the past year. Farm machinery (with special attention to the gas engine), animal husbandry, farm crops, and soils were some of the agricultural topics considered. Among other subjects receiving considerable attention were farm accounting, letter writing, business forms, and composition work.

The day's work began at 12.30 and closed at 3.30. This would enable those in attendance to do their chores and other work before leaving for school.

(e) *Some extension work.*—The Chatfield school has been especially successful in making its efforts at outward work felt in the home and community. No more striking illustration of this can be given than that the school was immediately instrumental in inducing the farmers of the community to erect the Chatfield Farmers' Cooperative Laundry, which is probably the first of its kind in the United States. Few things can mean more to the farm women, in reducing the amount of real drudgery, than such a labor-saving plant.

The instructor of agriculture and his advanced students undertake to test corn and all kinds of grain for the community, making a nominal charge to cover actual expenses. "The corn testing alone," says Supt. Forney, "has many times more than paid the salary of the agricultural man."

In the same way milk and cream are tested and soil analysis made. Then farmers' clubs and institutes are organized and maintained. One of the most popular innovations is the lecture courses at the rural schools, at which lantern slides and other illustrations are used.

IV. CONSOLIDATION AND GENUINE COMMUNITY SCHOOLS.

The public beginning to realize wastefulness under the old system.—The people in many parts of Minnesota are wide-awake to the great waste of the small school. They are beginning to realize that even where the one-teacher school is modern in architecture, is well kept, and in charge of a well-paid teacher, it can not fully meet the demands of modern country life. Even under the most favorable circumstances the school can not approximate the work that it should do—viz, prepare the boys and girls of the community for satisfied, well-rewarded living on the country soil.

The fact is, in Minnesota as elsewhere, the one-teacher school does not offer rural children what they need to-day. On account of this, real interest in school work is poorly sustained, and the older pupils too often leave school long before completing the eighth grade. No thinking person would expect anything better than we are getting from the one-teacher school system. Such schools were very good as pioneer schools in pioneer communities, but as schools seeking to be of assistance at this time of real husbandry farming they are distinct failures.

Association of schools has done much to correct these conditions in many parts of Minnesota. In others all the children of the com-

munity are being brought under one roof, in a centrally located, well-organized school, comprising the usual eight years of elementary work, together with four years of cultural and industrial high-school work.

Minnesota consolidated schools becoming effective community centers.—Much of the Minnesota consolidation has been well done. This is fortunate. In some States, unfortunately, consolidation has meant only the merging of a number of small schools into a large one, and providing the new school with the traditional town school course of study. If consolidation is not done well, it had better not be done at all. And to be done well the new school's course of study, while offering the broadest general culture, must somehow be rooted to the soil, and its activities must reach beyond the four walls of the school into the entire school community to do the educational work of the whole people.

In a number of the consolidated school communities which came under the investigator's notice in Minnesota, the country folk are getting at home many of the social-recreational attractions that they formerly sought in town. The schools are becoming social centers. In many places the assembly halls are used for regular country rallies of various kinds—here are held the extension lecture courses, the neighborhood social gatherings, the farmers' institutes, boys' and girls' clubs, mothers' meetings, and other meetings of similar nature. In this way the new schools are able to provide modern substitutes for many of the rural activities that disappeared with our transition from the household economy stage of farming to the present stage of exploitation and beginnings of husbandry farming.

Consolidation easily attained because of liberal laws.—The Holmberg Act went into effect April 18, 1911. The new law makes it reasonably easy to effect consolidation by having eliminated the more or less prohibitive conditions formerly in use, and adding, instead, liberal State-aid inducements.

Several States which have striven to consolidate their schools have failed on account of unreasonable laws; and others have been slow to act because they have had no State-aid features to offer as an inducement for change. The special features of the Minnesota law may be summarized as follows:

1. Twenty-five per cent of the resident freeholders only is required for petition to consolidate. Under the old law a majority was required.
2. When the election is called to vote on the proposition to consolidate, such election is held at one centrally located polling place, and a bare majority of all the votes cast is sufficient. Under the former act the districts voted separately, which made it vastly more difficult to get the requisite majority.

3. It sets certain high standards for teachers and school equipment that must be met before the new organization can be recognized by the State authorities or aid granted under the law. Thus:

(a) The same high standards of preparation and fitness must be maintained for teachers in the consolidated schools as in the high and graded schools in villages and cities.

(b) Principals of consolidated schools, in addition to the above requirements, must secure the special indorsement of the State superintendent of education as to fitness for the particular position sought.

(c) Fully equipped departments must be maintained for instruction in agriculture, manual training, and domestic science.

4. It authorizes the State superintendent of education to establish and maintain strict requirements for building construction and equipment, and for transportation of pupils.

5. Finally, the law provides very liberal State aid as an inducement for rural communities to reorganize their schools according to the above-mentioned standards.

State aid the great spur.—It is only just that State aid should be granted as a reward for aggressive educational enterprise, to stimulate a community to exert itself to build up the best kind of school. The liberal State aid offered for compliance with the conditions of the Holmberg law has acted as a wholesome stimulus, and made consolidation possible in many communities where this would otherwise have been impossible.

The schools of the State are classified, for purposes of receiving aid, as A, B, and C. They must be in session at least eight months and be thoroughly organized. They must also have modern, sanitary schoolhouses and suitable equipment. The schools of class A must have at least four departments; those of class B at least three departments; and those of class C at least two. Pupils living more than 2 miles from the school are transported at public expense, or their board and lodging may be paid if this is found more economical and convenient.

Schools under class A receive, annually, State aid amounting to \$1,500; those of class B, \$1,000; and class C, \$750.

In addition to the annual aid, a school in any of these classes may receive special aid in the construction of a modern building equal to 25 per cent of the cost of the building, provided that in no case shall any district receive more than \$1,500 for this purpose.

Degree of success in consolidation dependent on proper safeguarding.—The Minnesota law very wisely charges the State superintendent of education with the great responsibility of formulating and enforcing the rules and regulations under which the schools may receive aid and recognition under classes A, B, and C. Many States have a

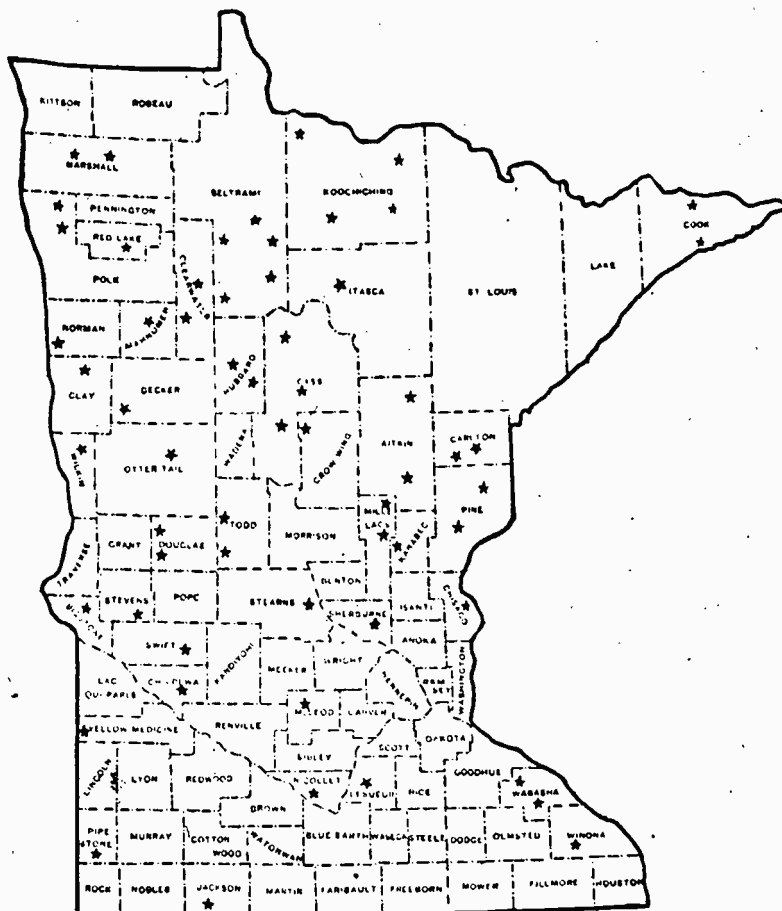


FIG. 3.—State map of consolidated schools.

larger number of consolidated schools than has Minnesota; but few, if any, have better consolidated schools.

Says ex-Rural School Commissioner E. M. Phillips:

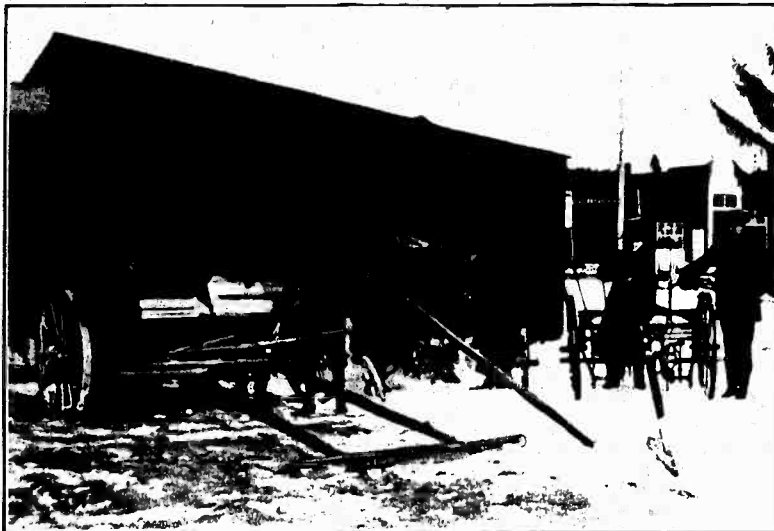
The success of the movement will not lie alone nor chiefly in the number of consolidations accomplished, but rather in the degree of real improvement in rural schools secured through the application of the law.

With this in view the State department has formulated a complete set of regulations for each of the three classes of schools, which are strictly enforced. They include preparation and special fitness of teachers; plans and specifications of buildings; building sites, water and drainage; school equipment; rules for conveyance of pupils; and course of study. These regulations are given in detail in the appendix.

Progress in consolidation both rapid and substantial.—As was said above, the State had only 9 consolidated schools previous to 1909. In 1912 there were 69. In 1912-13 the number increased to 75; in 1913-14 to 83; and at the time of writing it is 116, with several groups of districts in the process of organizing. The statistics from 30 of these consolidated schools are given below, to convey to the reader some idea of the progress that is being made. It will be understood that the table represents only about one-fourth of all the consolidated schools in the State.

Statistics of 30 consolidated schools, for the school year 1911-12.

Expenditures for consolidated school buildings.....	\$200, 548
Total assessed valuation.....	\$5, 483, 773
Total number children enrolled.....	3, 906
Total number children transported.....	932
Total cost of transportation.....	\$18, 414
Average cost per child per year for transportation.....	\$19. 75
Average cost of schooling per child per year including transportation.....	\$35. 65
Total cost of maintaining schools, including interest on bonded debts.....	\$139, 252
Total amount contributed by the State toward this cost of maintenance.....	\$78, 900
Total amount left to be raised by local taxation.....	\$60, 352
Average length of transportation routes (longest distance any child rides to school).....	4½ miles..
Total number routes maintained.....	60
Average number children per wagon.....	15
Largest number in any wagon.....	29
Smallest number in any wagon.....	2
Average monthly salary of drivers.....	\$40
Number of schools maintaining at least one year of high-school work.....	21
Number of pupils in high-school classes.....	395
Number of accredited State high schools.....	3
Number of accredited State graded schools.....	11
Number of school days before consolidation.....	156
Number of school days after consolidation.....	175
Average area of consolidated districts.....	35 sections..
Total number of separate districts combined to form 30 consolidated schools.....	141



A. CHATFIELD ASSOCIATED SCHOOLS.
Short-course boys in farm machinery class.



B. SAUK CENTER SCHOOL FARM.
Winner in central Minnesota corn contest.

The secret of the substantial growth of consolidation lies in the fact that the new schools fulfill the promise of providing the right kind of education for rural communities.

In equipment, including building, school farm, and laboratory facilities, in courses of study, and aggressive extension work, the consolidated schools are so much like the associated schools, described in detail above, that their repetition is unnecessary here.

V. INDUSTRIAL EDUCATION AND RURAL SCHOOL PROGRESS.

The industrial subjects and new school interest.—The gravest charge against the one-teacher rural school has been its failure to sustain the pupil's interest. This is due to the fact that it is unable to provide the kind of education demanded by the conditions of modern agriculture. It is time to realize that a school which answered well enough the needs of a pioneer civilization, need not, on that account, be expected to do the same for a generation of commercial farmers—indeed, it can not. The one-teacher school is the American pioneer school. As a nation the United States has passed the time when the farm home produced whatever the family group needed in the way of food, clothing, and tools. In the days of homecraft the schools could devote all their time to the cultural book elements, for then the manual industries were taught at home. Now, on the other hand, the average home can no longer teach these subjects. The schools must take over the new responsibility by offering courses in agriculture, household economics, manual training, and other vocational subjects.

The Minnesota schools, like schools elsewhere over the country, are striving to make all their activities more practical than they have been. The courses of study, which formerly had for their sole aim to prepare pupils for a higher school lying beyond the reach of the large majority of the pupils, are being reorganized and designed to provide both knowledge and skill, and to fit for immediate life activities. To quote the words of State Supt. C. G. Schulz:

There is a hopeful lack of uniformity, both in subject matter offered and in plans of instruction—a tendency to permit community needs, standards, and purposes to find suitable expression in the new public school curriculum. While protecting the vested rights of children to such schooling as will leave open every possible door of advancement for the exceptionally ambitious and capable, there is evident, in the recent administration of public schools, assurance that the large majority of pupils who are never to receive training beyond the high school shall be sent out equipped to fill acceptably some useful and reasonably remunerative place in our great economic organization. In all this there is promise of an improved citizenship. The present generation of school children must, it would seem, bring into our civic body an under-

standing of the necessity and the dignity of labor, well-established habits of industry, the tendency to do all work systematically, accurately, intelligently, and honestly, and a disposition to understand the economic problems of the day, which should make for improvement of industrial conditions.¹

Satisfactory progress in industrial education under the Putnam and Benson-Lee Acts.—The last few years have seen the establishment throughout Minnesota of a remarkable system of industrial high and graded schools. Some are ranked as State high schools, some as Holmberg consolidated schools, and some as associated schools.

Of these schools, 136 are organized under the Putnam Act and the Benson-Lee Act as industrial high schools. They become thriving local centers for a varied community work. Of first importance appear the regular school courses in agriculture, household economics, and manual training. But scarcely less so is the variety of short courses for young and old, and the agricultural extension courses given in cooperation with the State college of agriculture and the three secondary State schools of agriculture.

It is well to lay stress here on the fact that, while Minnesota has upon its statute books sane and liberal aid laws designed to encourage industrial instruction, the present degree of excellence of the schools could not have been attained had not the State been exceptionally fortunate in its educational leaders, who have guided and restrained, in season, the progressive school policy of the State, to the end that all the schools of the State are cooperating to extend the usefulness of the new system to the remotest precincts of the State.

The following figures show graphically the rapid growth of industrial instruction in State high schools during the last few years:

TABLE 3—Students enrolled in industrial subjects, 1908-1914.

Subjects.	1908-9	1909-10	1911-12	1912-13	1913-14
Manual training.....	4,233	4,770	6,892	7,064	7,350
Cooking.....	637	1,267	3,662	4,795	5,799
Sewing.....	994	1,616	4,587	5,637	6,680
Agriculture.....		1,331	2,961	3,631	4,053
Total.....	5,864	8,984	18,102	21,127	23,882

Statutory requirements for industrial aid.—At this time 40 high schools and 2 graded schools receive the annual special aid of \$2,500 under the Putnam Act, and 81 additional high schools and 15 additional graded schools receive the special industrial aid of \$1,800 under the Benson-Lee Act. These schools, in addition, receive aid as State high schools, or as consolidated or associated schools, and some of them for maintaining training departments for rural teachers.

In order to receive the \$2,500 aid under the Putnam Act, a school must maintain distinct departments in agriculture, household

¹ Seventeenth Biennial Rept. Dept. Pub. Instruction, 1911 and 1912, p. 22.

economics, and manual training; while the requirements for the \$1,800 aid under the Benson-Lee Act are a distinct department of agriculture and a department in either household economics or manual training.

The other important statutory requirements are:

1. The schools must employ specially trained instructors in agriculture, household economics, and manual training.
2. The \$2,500 aided schools must maintain in a high state of cultivation not less than 5 acres of land, for school gardens and experiments and demonstration purposes.
3. The schools shall organize short courses, whenever deemed advisable, for young men and women who can not attend school during all of the regular school year.

State high-school board charged with maintaining regulations for industrial aid.—This body is representative of the most important educational interests in the State. It comprises the State superintendent of education, the president of the State university, the president of the normal school board, and two other members appointed by the governor. The board prescribes the regulations under which aid may be asked and awarded; it outlines the fundamental principles of the industrial courses of study; it sets the standards of preparation and experience of the instructors; and specifies the necessary school equipment.

(a) *Courses of study.*—The high-school board has wisely refrained from prescribing a detailed, standardized course of study for the schools. The scope of work alone is outlined. The final content, methods of practice, etc., are left entirely to the initiative and experience of the local instructors, who may at any time call for the assistance and advice of the several inspectors of the board and other central school authorities.

This freedom to develop the study courses to local needs is one of the most valuable features of the Minnesota system; especially as this seems to be accomplished without loss to the homogeneousness of the working whole.

(b) *Instructors.*—The board fixes the number and qualifications of the industrial teachers. It limits the number of subjects they may teach and the number of their classes. It prescribes that agriculture instructors shall be paid by full calendar years, and otherwise prepares the way for effective teaching.

The details of State-aid requirements prescribed by the State high-school board appear in the appendix.

Comments on the industrial subjects.—It is impracticable to go into the details of the variety of industrial courses offered in the large number of State-aided schools. A few comments of a general nature will suffice.

(a) *Agriculture*.—At least 140 schools have well-equipped departments in agriculture, taught by graduates of standard agricultural colleges.

The agricultural course is a cumulative growth, beginning as nature study in the early grades. Much satisfactory work of this kind can be observed. Nature study is not taught as a separate subject, but leavens all subjects. This prepares the children for formal textbook work in agriculture, which generally begins with one period a week in the seventh grade and is continued through the eighth grade. The first-year high-school class ordinarily studies farm crops and the second-year class live stock. The best-equipped schools offer in their third and fourth years work in soils and farm management. In these schools the science courses are taking on more and more of the practical trend. Thus, for example, agricultural botany and agricultural chemistry are supplanting formal botany and chemistry.

The demand, at high salaries, for agriculture-college men to take charge of the new agricultural departments has attracted well-prepared instructors from many States. At this time 20 States and Canada are represented on the lists. All of them have added new inspiration and introduced new things. Mr. George B. Aiton, in speaking of the variety of work in the agricultural departments, says:

The work in farm crops varies properly in different parts of the State. Under the influence of Ames, to which we are much indebted, special work in corn leads off in the southern part of the State. In the Red River valley wheat comes first. The third place in classroom and laboratory attention is held by potatoes. The more enterprising instructors enrich schoolroom instruction by a careful study of elevators, flouring mills, and the growing crops of farmers. One instructor reports that his boys, 10 in number, were provided with bicycles, and did a large part of their study in the fields of the farmers within a radius of 6 miles. These are the boys that breakfasted on wienerwursts by the roadside one morning at 6 o'clock, surveyed, husked, and weighed a prize acre of corn, and were back in school by the middle of the forenoon. The activity displayed by boy scouts can be transferred to agriculture if the instructor knows how to lead.¹

(b) *School farms*.—Under the law each school drawing special aid for agriculture must provide a school farm for experiment purposes. A study of these farms discloses extremes in equipment and upkeep. Many have good barns and sheds and own their own teams and necessary machinery. Some even have a limited number of cattle, sheep, hogs, and poultry. This, however, is the exception. The classes in animal husbandry usually depend on neighboring farms for these first-hand studies. A number of instructors are able to make the farm crops pay for all outlays. At Spring Valley, mentioned above, the 16-acre farm netted last year a profit of nearly \$200, but this is unusual. Where the school authorities are obliged to hire teaming

¹ Twentieth An. Rep. State High Schools of Minn., 1913, p. 57.

done and have the farm at some distance from the school, the whole undertaking easily becomes burdensome. The success or failure of the school farm depends very largely on the degree of constructive ingenuity and tact of the agricultural instructor.

(c) *Extension work.*—The Minnesota system is broad enough to include the education of all the people, young and old. It works on the principle that education is a life process, and that all the educative machinery of the State shall be at the disposal of the public at all times to assist them solve their life problems. The extension

**EXTENSION COURSE IN SEWING,
CHATFIELD ASSOCIATED SCHOOLS.**

PURPOSE.

To afford young women who can not attend school the opportunity of pursuing a short course in sewing.

PLACE.

Sewing room in high-school building.

TIME.

The first and third Friday afternoons of each month, 1.15 to 3.30. The first class will meet October 17, 1913.

OUTLINE OF COURSE.

The course in sewing will be as practical as possible and will consist of simple garment making, use of patterns, repairing, and a brief study of textiles.

At the request of the class the above course of study may be subject to change.

All persons interested in the course should communicate with Miss Clara M. Jacobson, director of the course, or with E. B. Forney, superintendent of schools.

department of the State College of Agriculture may be considered at the head of the outward work of the schools. The county agricultural experts, of whom Minnesota is getting an increasing number, and the agricultural instructors of the high and graded schools also lend valuable assistance. The State-aided schools do their most active work in the formation of farmers' clubs, in giving advice in farm home construction, building silos, pruning and spraying orchards, cow testing, inoculation against hog cholera, milk testing, seed germination, holding farmers' institutes, and encouragement of new social-recreational activities and cooperative enterprises.

Agriculture short courses play an important part in the new schools. They will be discussed later.

(d) *Household economics.*—None of the industrial departments is more popular than this. More than 12,000 students in State-aided village and rural schools take courses in some or all phases of household economics. The large consolidated high and grade schools offer complete courses, extending over eight years, usually beginning with the fifth grade. The associated schools and central schools in

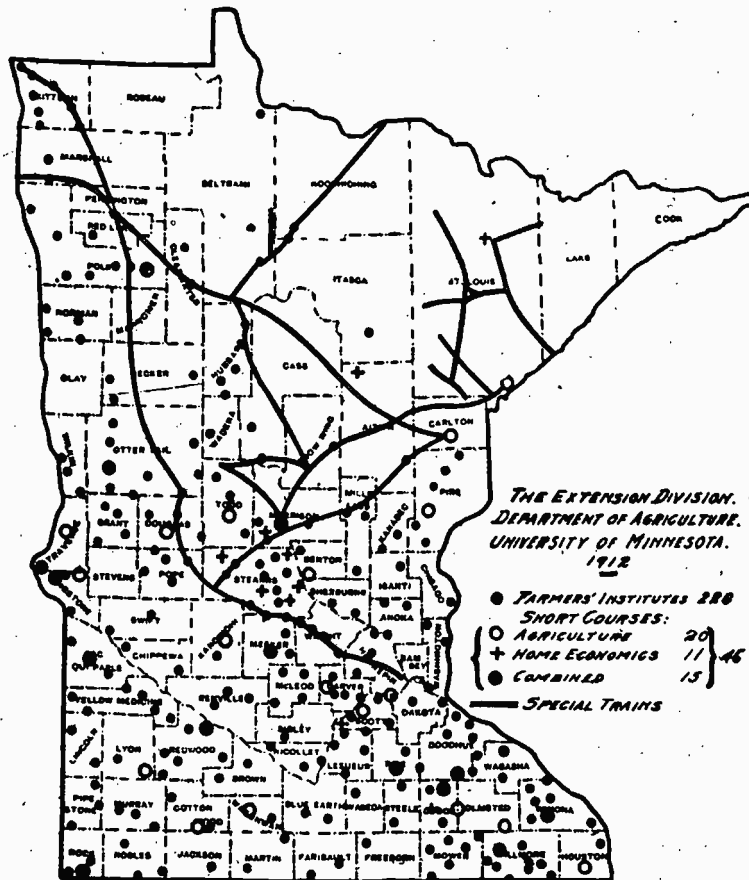


FIG. 4.—Extension work in Minnesota.

the northern undivided districts do much to direct these courses in the small rural schools.

The classes in cookery waste little time on making candies and indigestible salads. The wholesome in food and everyday practical things in home life receive most attention. The course of study given below is from the consolidated school at Grand Rapids:

Grade 5. Model and plain sewing; one 90-minute period per week; method—discussion, demonstration, practical work by pupils.

Grade 6. Plain sewing, repairing, and textiles; one 90-minute period per week; method—same as for fifth grade.

Grade 7. Sewing and textiles; one 90-minute period per week; use of patterns, making aprons, corset covers, crochet work; method—discussions, demonstrations, and practical work of pupils.

Grade 8. Grade cooking; one 90-minute period per week; classification of foods; experiments with proteids, carbohydrates, and fat; practical work in cooking and serving.

First year, high school:

Cooking—Two 90-minute periods per week; planning of meals, use of left-overs; practical work in cooking and serving.

Food study—One 45-minute period per week; food studied according to the following outline—physical composition, chemical composition, distribution, methods of production, methods of preparation, digestion, absorption, food value, and cost.

Plain sewing—Three 45-minute periods per week; use of patterns; study of textiles and garment making. Garments made: Cooking apron, corset cover, drawers, nightgown, underskirt.

Second year:

Dress making—Seven 45-minute periods per week for 26 weeks; use of patterns; selection of materials and styles. Garments made: Plain waist, shirt-waist, skirt, woolen school dress, gingham school dress, afternoon dress.

Art needlework—Seven 45-minute periods per week for 6 weeks; art needlework stitches, and crochet; hemming table linen.

Spring millinery—Seven 45-minute periods per week for 6 weeks; making frames; covering frames; making and trimming hats.

Third year:

Advanced cooking and serving—Two 90-minute periods per week for 26 weeks.

Home nursing—Two 90-minute periods per week for 6 weeks; recitation work, practical work with bandages.

Household management—Two 90-minute periods per week for 6 weeks; recitation work.

Dressmaking—Three 90-minute periods per week for 38 weeks; advanced work.

Garments made; wash dress, wool dress, graduation dress, class-night dress.

(d) *Manual training.*—In the best-equipped schools the work begins with the fifth grade and requires usually one double period a week throughout the last three years of the elementary school. In the high school more time is required; as a rule, one double period a day is necessary throughout the entire course. The manual-training shops are well equipped. Many schools have forge rooms, and even the rural schools in school associations and undivided districts are generally equipped with benches and tools.

There is a marked effort in these classes to include as much as possible of the great out-of-doors in the list of articles made. Mr. George B. Aiton, on his rounds of inspection, has encouraged this. He insists that, while the pupils have not, perhaps, devoted too much time to making articles of a purely domestic nature, such as Morris chairs, mission furniture, benches, stands, desks, chests, match scratchers, ironing boards, etc., they have not devoted enough time to

the rugged outside world. But a reaction has set in. As Mr. Aiton says:

The machine shops of our large school are delightfully masculine. Not a few instructors are launching out in a practical way. The younger boys are making sleds, toy windmills, waterwheels, bird houses, tent pins, athletic poles, and a variety of other articles that appeal to the mind of the active lad. In several schools I have noticed activity in the construction of poultry coops, crates, brooders, and nests. Flytraps and beehives are made in spring. Tool handles, ladders, nail boxes, tool chests, and saw horses are in evidence. The list of distinctively farm articles includes milking stools, bag holders, gates, feed racks, wagon poles, wagon jacks, wagon boxes, grain tanks, hay racks, neck yokes, and whistle trees. The manual-training class assists the agricultural department by making tables and benches for the short course, as well as corn trees for drying seed corn, corn trays for use in judging corn, and germination boxes for seed corn. The blacksmith shop contributed a variety of latches, spikes, bolts, chisels, and hinges. Valuable instruction is given in laying out and cutting rafters and risers for stairways and in constructing barn models. I was pleased to hear one instructor say that if some farmer would dump the dimension stuff for a barn on the school grounds he would have the boys get out the framework for the entire building.¹

Short courses for the whole community.—The winter short courses offered by the Putnam and Benson-Lee Schools are rapidly becoming a prominent feature in the new community schools. It is a species of continuation schools for people regularly beyond the reach of school. There is no maximum age limit. Students may enroll from 15 years of age, or thereabouts, up toward 99 years. Anyone who can profit by the courses is made welcome. The courses are 3, 4, 5, and 6 months in length, varying in different schools. These are regularly intended for youth of the community beyond school age. Six-day courses for the parents of the community are popular in many places during the last week of the regular short courses.

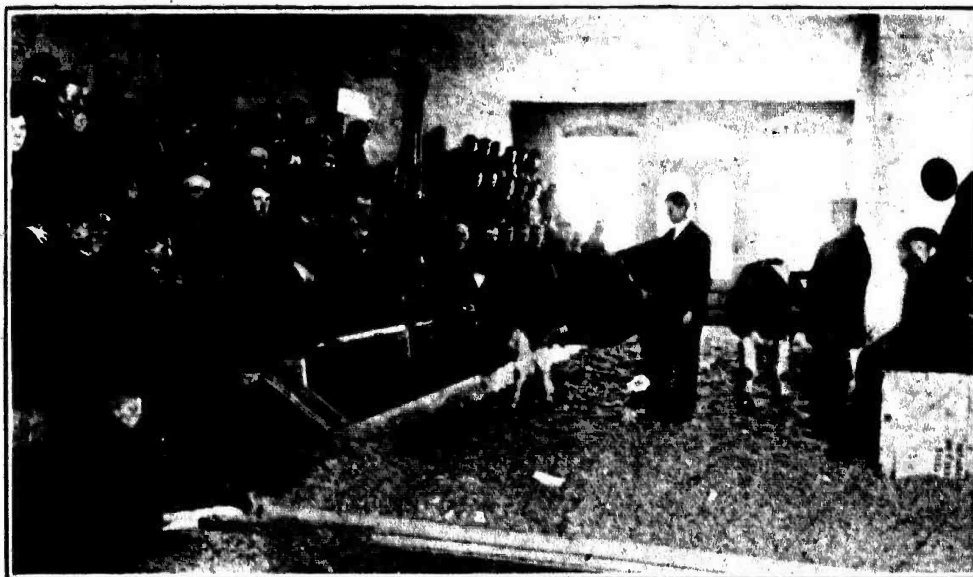
The time is chosen to suit the farmers. The courses begin in November, after the fall work is done, and close in March, before the rush of spring work begins. The school hours are from 10 o'clock a. m. to 3 o'clock p. m., which allows time for chores at home morning and evening.

The daily routine includes a general brushing up in the elementary subjects. Farm arithmetic and accounting hold prominent places. Farm law, special phases of agriculture, blacksmithing, carpentry, cooking, sewing, and other subjects are presented by enthusiastic instructors, many of whom are secured solely for the short courses. Each student does the work he needs the most.

Says Mr. George B. Aiton:

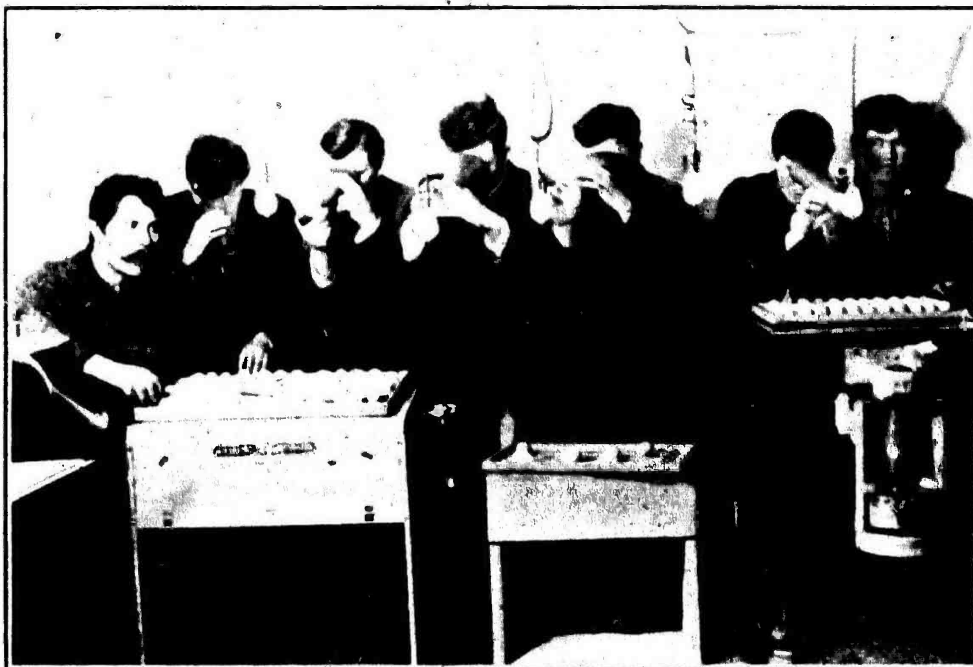
It is not unusual to find an agricultural giant plying the trade of Vulcan at his ease one hour, while the next finds him perspiring over the sonorous page of a third reader. If any part of our work demonstrates that the Minnesota high-school system has finally got down to business, it is the winter short courses now going on in a hundred schools.

¹ Twentieth An. Rept. State High Schools of Minn., 1913, p. 49.



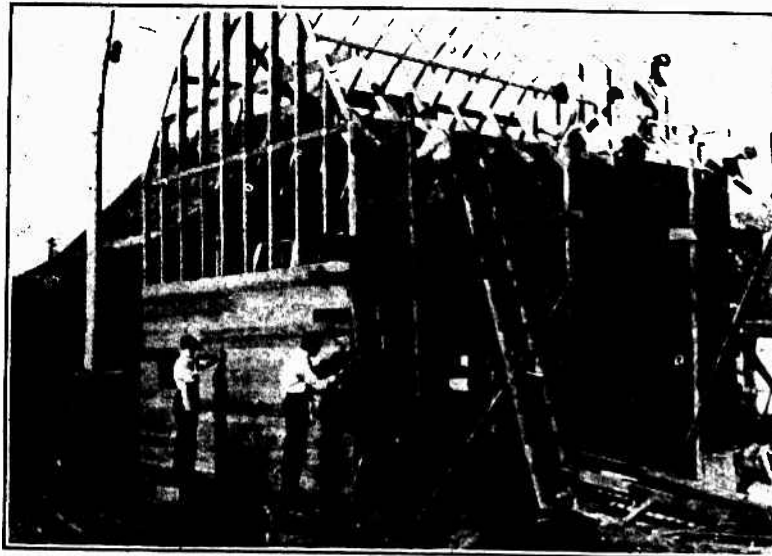
A. STUDYING STOCK.

Farmers' short course at Sauk Center. Thus are met the needs of the people beyond ordinary school age.



B. TESTING EGGS FOR FERTILITY.

Short course, associated schools of Sleepy Eye.



MANUAL TRAINING CLASS IN LE SUEUR HIGH SCHOOL.

The boys are building a small barn on contract.

DAILY PROGRAM OF THE SHORT COURSE OF THE MILACA ASSOCIATED SCHOOLS.

Hour	Subject	1st week— Nov. 6-Nov. 10.	2d week— Nov. 13-Nov. 17.	3d week— Nov. 20-Nov. 24.	4th week— Nov. 27-Dec. 1.	5th week— Dec. 4-Dec. 8.	6th week— Dec. 11-Dec. 15.	7th week— Dec. 18-Dec. 22.	8th week— Jan. 9-Jan. 12.	9th week— Jan. 16-Jan. 19.
10.00 to 10.45.	Agriculture (Boys and girls). DAILY.	Soils. Cultivation.	Plant foods. Fertilizers.	Corn culture. Selection. Improvement. Feeding. Judging.	Forage crops. Clover.	Potato culture. Cereals. Judging.	Crop rotation. Crop improvement.	Dairy breeds. Types. Feeding. Improvement. Care.	Breeds and types of live stock.	Animal feeding. Animal breed- ing.
10.45 to 12.15.	Cooking/ (For girls). DAILY.	Study of foods. Scalloped apples. Hard sauce. Coffee.	Potatoes. Vegetables. Sharpening tools.	Breakfast foods.	Rice. Bread.	Rolls. Jelly. Eggs.	Eggs. Custard.	Meats. Pot roast.	Soup. Tomato sauce.	Hash. Olinger bread. Fruit pudding.
1.30 to 2.15.	Manual training (For boys). DAILY.	Sawing. Planing.	Timber spiking.	Batch book. Joints.	Feed trough. Hammer handles. File handle. Bread board.	Bread board. Sharpening blis.	Miter box. Pipe fitting.	Forge work. Cold chisel. Tempering.	Forging punch. Forging gate- hook.	Shingle. Doblature. Forging links.
2.15 to 3.00.	Business forms and Business law (Boys and girls). DAILY.	Stitching.	Home. Children. Beds. Rooms.	Sewing bag.	Sewing bag.	Kitchen apron.	Dresser scarf.	Nightgown.	Nightgown.	Corset cover. Buttonholes.
		Rapid calcu- lation. Addition, sub- traction.	Rapid calcu- lation. Multiplication and division.	Fractions. Addition, sub- traction.	Fractions. Multiplication and division.	Cancellation and fractions.	Decimals.	Decimals.	Surfite meas- urement.	Liquid meas- urements.
		General prin- ciples.	Debit and credit.	Debit and credit.	Daybook.	Daybook.	Ledger.	Ledger.	Trial balance.	Account with fields and crops.
		Penmanship. Letter writing.	Penmanship. Letter writing. Orders for goods.	Bills. Invoices. Statements. Receipts.	Postal infor- mation. Express money order. Postal money orders.	Contracts.	Leases.	Abstracts. Deeds.	Mortgages.	Banking. Passbook. Check. Credit allp.

DAILY PROGRAM OF THE SCHOOL COURSE OF THE MILACA ASSOCIATED SCHOOLS—Continued.

Hour.	Subject.	10th week— Jan. 22-Jan. 26.	11th week— Jan. 29-Feb. 2.	12th week— Feb. 5-Feb. 9.	13th week— Feb. 12-Feb. 16.	14th week— Feb. 19-Feb. 23.	15th week— Feb. 26-Mar. 1.	16th week— Mar. 4-Mar. 8.	17th week— Mar. 11-Mar. 15.	18th week— Mar. 18-Mar. 22.
10.00 to 10.45.	Agriculture (Boys and girls). DAILY.	Animal dis- eases. Poultry.	Dairy practice. Milk testing. Cream test- ing. Handling milk.	Dairy practice. Cow feeding. Record sheet. Profitable cows.	Stiles and sledge. Barn plans.	Vegetable and fruit culture.	Plant diseases and pests. Weeds.	Farm man- agement. Marketing.	Care of farm machinery. Roads. Gas engines.	
10.45 to 12.15.	Cooking (For girls). DAILY.	Biscuits. Cold saw.	Oyster stew. Cakes. Brown bread.	Coffee. Cakes. Muffins. Pie.	Pudding. Cakes.	White cake. Sponge cake.	Ice cream. Cookies. Salad.	Bread. Pudding. Jellied prunes.	Veal cutlets. Care of kitchen.	
1.30 to 2.15.	Sewing (Girls). MONDAY, WED- NESDAY AND FRIDAY.	Drawers.	Fancy stitches. Patching.	Patching. Darning.	Under skirt. Shirtrwaist.	Towel roller. Drawer. Wagon tongue.	Tool chest or Wagon box or Hayrack.	Tool chest, Wagon box or Hayrack.	Tool chest, Wagon box or Hayrack.	
	Business arith- metic (Boys). MONDAY, WED- NESDAY AND FRIDAY.	Dry measure- ment.	Weights.	Board measure. Masonry.	Lathing. Plastering. Papering. Painting.	Percentage and interest.	Interest.	Partial pay- ments.	Taxes. Partnership.	
	Farm accounts (Boys and girls). TUESDAY AND THURSDAY.	Account with fields and crops.	Account with garden.	Account with live stock.	Account with dairy.	Account with poultry.	Account with animal ration.	Account with home.	Inventory.	
2.15 to 3.00.	Business forms and Business law (Boys and girls). DAILY.	Promissory note. Drafts.	Insurance and Corporations.	Petitions. Power of attor- ney. Agencies.	Wills.	Settling of estates.	Taxes for roads, schools, etc. How levied and collected.	Land survey- ing. Townships. Sections, etc.	Highways. Legal tenders.	

VI. TEACHER TRAINING FOR THE RURAL SCHOOLS.

Schools where this training is offered.—The Minnesota rural schools draw their supply of specially trained teachers mainly from two sources: The professional department of the State agricultural college and the teacher-training departments in State high schools. The five State normal schools do not offer specialized courses for rural teachers, as practically their whole annual output is absorbed by the high and graded schools. A recent ruling of the State high-school board is to the effect that, beginning with the year 1915, "all new appointees for the elementary departments of high and graded schools must be advanced-course normal-school graduates." This is a progressive step for better teaching in these two classes of schools, but will mean that the State normal schools can have little or no time to devote to rural-teacher training.

The regular educational courses offered by the college of agriculture prepare teachers to instruct in agriculture and other industrial subjects in every variety of State high schools, including consolidated and associated schools. Special summer courses are open to rural teachers regularly at work in the field. Here, too, the industrial subjects are emphasized. Nearly 1,000 rural teachers annually take advantage of the summer courses.

The strong teachers of agriculture and other industrial subjects and principals of the new consolidated and associated schools must continue to come from the State agricultural college, and from similar colleges in other States.

Special training courses in high schools.—The largest immediate supply of specially prepared rural teachers will, however, have to come from State high schools legally authorized to offer rural-teacher training courses. Many educators have doubted the advisability of introducing professional work in high schools. Professionally prepared teachers for the one-teacher schools must, nevertheless, be provided in some manner, and no other institution seems better able to do the work at the present time than the high school.

Minnesota requires 9,000 teachers for its one-teacher schools. Less than 25 per cent of those now in service have received any professional training for their work. Here one encounters what is possibly the greatest weakness in the already unsatisfactory one-teacher school system. The evident reason for this lack of professional preparation is that teachers in these schools are permitted to teach on common-school certificates, issued upon passing an ordinary academic examination. A new certification law, requiring a minimum amount of professional work as resident students in recognized schools would go a long way toward correcting this weakness.

Such a law would also stimulate the work in the eighty-odd training departments in high schools, whose product now must compete, as it were, with the untrained teachers holding common-school certificates.

Weakness of the training departments as now organized.—The present organization and work of these departments are far from satisfactory, although considerable progress is being made. The most apparent weaknesses are, (1) students may receive a certificate to teach without having completed the four years of the high-school course; and (2) country-leadership subjects are largely left out of consideration.

In regard to the first point, it would seem highly desirable that no student should be granted the training department diploma with less than four years of work, i. e., no one should enter the training class until he has had three years' credit in academic work. It is highly desirable even that the regular high-school course be completed first and the training course come as a fifth or graduate year. In this manner the teachers would get a fair academic foundation and have a reasonable degree of maturity to meet the many problems of modern rural life.

Every rural teacher should have a good knowledge of rural life needs by having studied at least a beginning course in rural life problems, including elementary rural sociology and economics. Without some inspiration along such lines the teachers of the small rural schools will find it difficult to become such rural community leaders as are needed nowadays. The Minnesota training departments devote little time to this work, and even the new industrial subjects are not required, although encouraged. The State department of education has just added to its corps of specialists a supervisor of teacher-training departments in high schools. For this important position it has chosen one of the most energetic rural life workers in the country; so that the immediate future may see the work take a strong forward impetus in rural socialization.

Some of the requirements under the Minnesota law.—Teacher-training departments in high schools may draw aid in the sum of \$1,000 annually as soon as they have complied with certain regulations laid down by the State high-school board, among which are the following:

Quarters.—A suitable room, having not less than 650 square feet of floor space, shall be set apart for the exclusive use of this department. A second room, for the use of an ungraded model school, is desirable. Hall space and cloakrooms may be used for practice classes. The training department shall be in close connection with the grades. It shall be distinct from the high school, but shall not be located in a small, remote ward building.

Equipment.—A department library shall be provided for the study of geography, American history, and literature. Ten per cent of the annual State aid for this depart-

ment shall be expended each year for books and other equipment. To obtain credit, purchases shall be approved by the supervisor before they are made. Books bought for the general school library may not be credited to this department. The purchase of works in pedagogy and psychology shall be deferred until adequate primary material and classroom aids have been accumulated.

A paper cutter, manila paper, and a set of rubber printing type (\$3.50) shall be provided for the use of the department.

Instructor.—(a) Qualifications: The work shall be placed in charge of a special instructor holding a certificate granted by the State superintendent for this work. Such certificates will be granted only to teachers of approved experience, who seem to have special fitness, who have a knowledge of rural school conditions, and who, in addition, qualify by presenting one of the following:

- (1) An advanced diploma from a normal school of this State.
- (2) An indorsed diploma from the corresponding course of a normal school of another State.
- (3) A diploma from the college of education of the University of Minnesota.
- (4) A diploma from a reputable college or university.
- (5) A professional State teachers' certificate.

(b) Salary: The salary of such instructor shall be not less than \$750 a year.

(c) Program: The entire time of the special instructor shall be given to the instruction contemplated by the act.

One-half of the day shall be devoted to classroom work, arranged in four periods; the other to supervising practice work, overseeing the model school, directing the preparation of students for their practice work, directing reference work, guiding the students in the making of charts, and the filling of scrapbooks with devices, programs for special days, memory gems, games, stories, outlines, and other matter for future use.

Enrollment.—(a) The enrollment in this department shall not exceed 20 for each instructor. The superintendent may, at his discretion, enroll students of sufficient maturity who are regular members of the high school and have not less than four high-school credits, or persons who have taught eight months and are recommended by the county superintendent. The superintendent shall raise the requirements for admission as rapidly as conditions permit and may limit the enrollment to 15. Preference shall be shown applicants whose preparation is superior. The superintendent shall have authority to dismiss students whose work is not satisfactory.

(b) Neither high-school students who desire to remove entrance conditions nor grammar-grade students shall be enrolled.

(c) Students enrolled for this special instruction shall give their entire time to the work. They shall not be permitted to join other classes or to carry outside studies, except that in schools which have proper facilities students in the training department may be encouraged to take up some work in agriculture, sewing, cooking, manual training, or drawing. A corresponding reduction may in such case be made from work in the academic studies.

(d) Students desiring to devote a part of their time to this work may be permitted by the superintendent to do so, but such students shall not be counted as enrolled. Their recitations shall not be allowed to interfere with the flexibility of the training department program, nor shall they be admitted at all should the enrollment of regular students reach 15.

(e) Instruction shall not be modified to meet the needs of students not regularly enrolled in this department.

Practical side of the training.—The board prescribes strict requirements for practice teaching under the regular grade teachers of the school. It also encourages the organization of model rural schools, and expects the student teachers to make frequent visits to near-by

rural schools under the guidance of their special instructor and the county superintendent. This phase of the work is well done in most schools. The regulations are:

Practice teaching.—Each student shall devote one-quarter day or its full equivalent to actual teaching. During that part of the day the student shall be a part of the teaching force of the school and on active duty as assistant to a grade teacher, according to arrangements made by the instructor of the training department. On the first morning of the school year the more capable students shall be assigned to assist the regular teachers in opening school in the different grades. Cloakroom supervision, hall duty, the correction of exercises, the oversight of seat work, tutoring, group work, and the instructing of sections of a grade—into which it may be divided for the purpose—are the usual forms of work. Mere observation has little value and shall be given no credit. If managed rightly, the subject knowledge gained through preparing for the recitation of groups, sections, or model school classes is more practical and does more to develop independence than the ordinary academic work of the department.

The first care of the instructor should be to organize the department as a teaching force, to get the students into the attitude of the teacher, to make them helpful and welcome in the school system. This done, the academic work may be organized with clearer insight. Students who are too immature to fall in with a scheme of this sort, too immature to assist pupils in seat work, or to hear an awkward boy read must not be enrolled in the training department. In the absence or illness of the teacher, two or more students may be put in charge of a grade room, but this shall not be construed as sanctioning any plan to have room work done by students while the regular teacher stands by.

Model school.—(a) The organization of an ungraded model school is encouraged. A principal, with as many assistants as are needed, may be detailed to take charge for a week or even a month. It is desirable that the organization of classes for the work be as nearly as possible the organization most practicable for an ungraded rural school. Such a one-teacher school can not be organized successfully into eight grades; it can be arranged better into three main groups—primary, intermediate, and advanced. Much of the instruction should be through general lessons in which all three groups take part.

(b) The daily program should be framed to serve as a model for a rural school. It should be changed from time to time to meet varying conditions, but whatever changes are made, much attention should be given to general exercises. Not enough of this kind of teaching has been done in the ungraded school. The student teachers should be made to see that, by careful planning, much can be accomplished in even a 10-minute period. All should help in planning the general lessons, and each should have an opportunity to act as teacher. By taking notes and collecting materials from day to day, each teacher can become well prepared to do this work in the country school.

(c) Primary pupils entering school at the opening of the spring term may be organized into a model school if so desired. The model school may be managed in such a way at any time as to afford relief to a crowded room or an overburdened teacher, but it shall in no case be constituted one of the grade rooms of the school so as to dispense with the services of a regular teacher.

Rural schools.—The training department shall connect closely with the rural schools. The county superintendent should be as frequent a visitor as his other duties permit. He should give the department practical talks. Arrangements shall be made for instructor and students to visit the rural schools of the vicinity. This is especially desirable at the opening of the term, to acquaint the students with the details of organization and classification as presented in these schools. The cost of transportation is recognized as legitimate expenditure of the special aid.

APPENDIX.

RULES AND REGULATIONS OF THE MINNESOTA STATE DEPARTMENT OF EDUCATION

Relative to the Consolidation of Schools under the Holmberg Act,
Chapter 207, Laws of 1911.

(A) FOR SCHOOLS OF FOUR OR MORE ROOMS.

I. TEACHERS.

(1) Beginning with September, 1913, the principal teacher must present to this office for approval credentials showing special preparation of not less than one year for teaching agriculture and manual training. School boards are advised not to make contracts with principals who have not secured the indorsement of the State superintendent. (The law requires that principals must at least be graduates of the advanced course of a State normal school.)

(2) At least one of the teachers of a class A school must be qualified to teach the elements of sewing and cookery and must have the written indorsement of the State superintendent.

(3) Assistant teachers are required to have the same qualifications as those of graded schools, viz, the teacher of the primary room must be an advanced normal-school graduate and must have had at least one year of special training. All other teachers must hold at least first-grade common-school certificates. High-school normal-department graduates are not qualified.

II. BUILDINGS.

(1) Before any steps are taken for the letting of contracts for the construction of buildings, all plans and specifications must be submitted to this office for approval. They must also have the approval of the State board of health. Such plans must contain provision for flush closets, a bubbling fountain on each floor, a central heating plant, fan ventilation, and lavatories in each closet. Buildings must provide suitable room for a library. There must also be provision for manual training and home economics, with floor space of at least 35 square feet for each pupil taking the work.

(2) In order to secure State aid for building, districts must furnish this office with vouchers for expenditures in the construction of the building.

III. BUILDING SITE, WATER, AND DRAINAGE.

(1) Site should be chosen for its central location, effective drainage, and general attractiveness.

(2) In communities where there is no public water supply tubular or driven wells must be provided to furnish water for drinking, closets, and lavatories. *A surface well will not be approved.* A pressure tank of sufficient capacity must be installed. A gasoline engine or other mechanical power must be provided for pumping water. The overflow from the drinking fountains is to drain over urinals. All overflow from toilets must be carried off by means of sewer or into a septic tank.

IV. EQUIPMENT.

Each room must have at least 100 square feet of substantial blackboard (preferably slate) and be seated with single desks, at least one row of which shall be adjustable. The district must purchase at least \$25 worth of library books annually and provide each grade with at least two sets of supplementary readers. Each of the two upper grade rooms shall have an 18-inch pendent globe, one full set of up-to-date maps, including a map of Minnesota, all in cases, one unabridged dictionary, and at least 10 abridged dictionaries.

V. TRANSPORTATION.

(1) Suitable conveyances, built under specifications furnished by this office, must be provided. Wagon specifications will be sent to county superintendents upon application.

(2) No consolidation will be approved under which children must be carried more than 6 miles. It is recommended that no plan be undertaken where children must be carried more than 5 miles.

VI. COURSE OF STUDY.

This will in general be the same as that at present followed in graded schools. This department issued an outline for industrial courses in September, 1912.

(B) FOR SCHOOLS OF LESS THAN FOUR ROOMS.

I. TEACHERS.

(1) Principals, under the law, must be holders of at least a first-grade common-school certificate. The indorsement of the State superintendent as to ability to teach industrial subjects is necessary.

(2) One of the teachers must be qualified to teach home economics.

(3) All teachers must be qualified as noted above for four-room schools.

II. BUILDINGS.

The regulations are the same as for four-room building, except that heating and ventilation requirements are the same as for a semigraded school.

III. BUILDING SITE, WATER, AND DRAINAGE.

(Same as for four-room building.)

IV. EQUIPMENT.

Blackboard, supplementary readers, library, and desk requirements are the same as for four-room building. The upper-grade room must have an 18-inch pendent globe, a complete set of up-to-date maps, including map of Minnesota, an unabridged dictionary, and at least 10 abridged dictionaries.

V. TRANSPORTATION.

(Same as for four-room building.)

VI. COURSE OF STUDY.

This will in substance conform to that at present employed in semigraded schools, except as to industrial work, outlines for which will be sent to county superintendents in September.

REGULATIONS OF THE STATE HIGH-SCHOOL BOARD**Relative to Schools Seeking Aid under the Putnam and Benson-Lee Acts.****1. APPLICATIONS FOR STATE AID.**

- a. Applications shall be made before the 1st day of August of the first year for which aid is asked on the blank form prepared for the purpose.
- b. Each school must be listed provisionally by the high-school board before it begins work. If at the end of the first semester it has complied with the conditions, it shall be officially designated for that year.
- c. Each school district of less than 18 sections listed for the \$2,500 aid is required to effect association with rural school districts so as to embrace within its territory at least 18 sections.

2. AWARD OF AID.

- a. The annual award shall be made at the regular August meeting of the high-school board and shall be based on a compliance with the statutes and the rules of this board relative to amount of aid for which the school has qualified.
- b. Each school qualifying for \$2,500 aid shall receive not exceeding \$2,500 per year, and in addition thereto \$150 per year for each associated rural school district, but in no case shall the total amount received by any such school exceed two-thirds of the sum actually expended upon such agricultural and industrial department as certified to the State high-school board.
- c. Each school qualifying for \$1,800 aid shall receive not exceeding \$1,800 per year, and in addition thereto \$150 per year for each associated rural school district, but in no case shall the amount awarded exceed the actual expenditure of the school for an agricultural department and a department of home economics or manual training as certified to the high-school board.
- d. In reckoning aid credit shall be given for (a) salaries of special instructors—in case part time is devoted to this work, corresponding credit shall be given; (b) equipment, including tools and apparatus; (c) supplies, including seeds; (d) labor and team work; (e) reference books; (f) extension work in rural schools and among farmers; (g) transportation of instructors.

3. COURSES OF STUDY.

- a. The industrial courses required by law and covered by these rules shall be maintained throughout the school year.
- b. The work in agriculture shall include: (a) A course based on textbooks, bulletins, and lectures. Agronomy and animal husbandry shall be given not less than a year each. It is desirable that botany, chemistry, zoology, and physics should be given an agricultural trend, but these subjects shall not be counted as a part of the four years course in agriculture. (b) A general course of one year to include gardening, fruit growing, dairying, and poultry raising. (c) A laboratory course, including physical examination of soils, preparation of weed-seed cases, testing of seeds, testing for butter fat, grain judging, stock judging, etc. (d) Special work along some line of local interest, such as dairying, corn breeding, small grain, potatoes, fruit, meat products, poultry, etc. The school shall not only maintain a standard of general efficiency, but shall develop strength in chosen specialty. (e) The organization of institute work in cooperation with extension division of the college of agriculture of the State university. (f) A short course of three months. In case local conditions are unfavorable the course may be discontinued with the written consent of the inspector.

4. INSTRUCTORS.

a. In a school receiving \$2,500 aid the corps shall include not less than three special instructors, one qualified to teach agriculture, one shopwork, and one home economics. The entire time of each instructor shall be devoted to his department.

b. In a school receiving \$1,800 aid two industrial instructors shall be employed, one qualified to teach agriculture and one to teach either home economics or manual training. These instructors shall be in addition to the instructor per 30 students required for State high-school aid.

c. The principal of a graded school having not to exceed five grade teachers may teach one industrial subject. In such case he must have the qualifications of an industrial teacher.

d. The agricultural instructor shall be employed for the full calendar year of 12 months. The year of employment shall begin August 1. His entire time shall be given to the teaching of agriculture and extension work, provided that in schools receiving \$1,800 aid the instructor in agriculture may, with the written consent of the inspector, be permitted to teach one additional subject, particularly one related to agriculture. This rule shall not prevent the principal of a graded school from acting as instructor of agriculture.

e. The instructor shall be provided with laboratory facilities. During the fall and the spring of the year he shall have not less than a continuous half day for outside and extension work. He shall make a close study of local conditions and attend markets, horticultural meetings, meetings of creamery and stock-breeding and other associations, and such other gatherings as afford opportunity to make the acquaintance of farmers.

f. The instructor in agriculture may not direct manual training, but in schools receiving \$1,800 aid instructors in manual training or home economics may, if qualified, devote part time to academic work. The work in home economics may be divided between two instructors, one for sewing and the other for cooking.

g. The legal qualifications of instructors shall be those prescribed under "Requirements in Regard to Certificates of Teachers in High and Graded Schools."

5. DEMONSTRATION PLAT.

Each school receiving \$2,500 aid shall maintain a demonstration plat of 5 acres or more. This plat shall be owned by the school district or be held under a long lease. It must be kept free of weeds and in a state proper for cultivation and for demonstration purposes. The border shall be seeded down into a sward. A part of the plat shall be devoted to a permanent rotation of field crops, of which a record shall be kept by the instructor.

6. EQUIPMENT.

a. Agriculture. The instructor shall have one or more rooms exclusively for this work. The classroom shall be equipped with a well-arranged reference library, including bulletins and facilities for displaying agricultural products. The laboratory shall be provided with apparatus for testing soils, milk, and seeds. The agricultural quarters shall be easily accessible to visitors or persons bringing in farm products. An outside entrance is desirable.

b. Home economics. (a) In schools receiving \$1,800 aid a special room shall be fitted up with tables, cooking utensils, table service, cupboards, and conveniences for storing kitchen supplies. An adequate equipment shall also be provided, including cutting tables, one or more sewing machines, material suitable for patterns, the materials required for exercise, and such implements as are required in the usual sewing room. (b) In schools receiving \$2,500 aid the quarters shall include a dining room or administration room, a kitchen laboratory, and a room equipped with tables and machines for sewing.

c. **Manual training.** A special room for woodwork shall be provided with benches and the necessary tools. Material for exercises shall be supplied free of charge. Lumber for articles taken home may be charged for at cost. Schools receiving \$2,500 aid shall provide facilities for blacksmithing.

d. The rooms used for industrial purposes must be approved by the inspector. Where but one room is used for a department not less than 700 square feet of floor space shall be considered adequate, and all rooms must be properly lighted and well ventilated.

e. Schools receiving \$2,500 aid shall maintain a farm building large enough to store supplies, tools, and machinery, in case the plat is remote from school building.

7. CREDITS.

If the work is done satisfactorily, two periods given daily to an industrial subject or subjects for one year shall count as a credit.

TYRICAL SHORT COURSES

Offered by the Putnam and Benson-Lee Schools.

The following is an outline of the 14 weeks' short course offered at the Benson-Lee School, at Red Lake Falls, in 1912:

PURPOSE AND NATURE OF THE COURSE.

There are many young people in Red Lake Falls and its surrounding farming territory who have not had adequate educational opportunity. Home duties prevent their attendance at school for a full school year of nine months. The rural school, because of its limited facilities, they have outgrown and do not desire to attend. For these young people the course outlined on these pages is offered. It is a program by reading through the brief outlines of the various subjects in the course and the aim is to keep the work intensely practical in nature.

FARM ACCOUNTS.

Three periods per week.

The course will be a combination of very practical arithmetic and farm accounting. Under farm arithmetic acreage of fields, contents of bins, cribs, and tanks, lumber measurements, interest, discounts, and other topics of equal importance will be treated. Under accounting a simple system of bookkeeping for farm use will be taught.

AGRICULTURE.

Three periods per week.

The time in this work will be divided between actual exercises in milk testing, seed testing, grain and stock judging, rope splicing, etc., and a study of the same topics from a practical textbook and the school's agricultural library and bulletins.

ENGLISH.

Two periods per week.

The writing and speaking of correct English, use of capitals, punctuation, and letter writing will occupy the time devoted to this subject.

LOCAL GOVERNMENT.

Three periods per week.

A study will be made of the school district, the township, the county, and the State, both as to organization and administration.

BUSINESS LAW.

One period per week on the subjects of contracts, negotiable instruments, riparian rights, transfers of real property, etc., simple business law with which every citizen should be equipped.

COOKING

Two double periods per week.

The time devoted to cooking will be spent upon the actual mixing and baking of doughs and batters used in the making of bread, cakes, muffins, etc., and in the preparation and serving of meat. The splendid cooking equipment installed a year ago will be used in this work.

SEWING.

Three periods per week.

Garments, such as aprons, undergarments, shirt waists, and dresses will be made in this sewing class. Materials used in these exercises to be furnished by the students, and the garments will be their property after completion.

CARPENTRY.

Three periods per week.

The articles which will be recommended for choice in the woodwork class will be the milk stool, singletrees, evener, wagon jack, wheelbarrow, hayrack, and other useful articles. One of the best tool and bench equipments owned by the schools of northwestern Minnesota will be available for the work in carpentry.

BLACKSMITHING.

One double period per week.

The young men will be occupied in blacksmithing in making useful articles such as staples, barn-door hooks, chains, welding, repair work, work with stocks and dies, drill, etc. The board of education of Red Lake Falls installed in September a fine forge equipment with anvils, tongs, shears, drill, etc. This will be at the service of the students enrolled in the short course.

The Putnam School, at Madison, gives a two-year short course, each 14 weeks long. The course comprises agriculture, woodwork, cooking, sewing, English, arithmetic, bookkeeping, civil government, and commercial law. The outline in agriculture follows:

FIRST-YEAR COURSE.

Soils.—Work on soils of this county, elements in the soil, uses of green manures, barnyard manures, effect on soil of grain farming and stock farming.

Crops.—Testing grain for weed seeds, germination, corn and grain judging, selection of seed.

Forage crops.—Alfalfa, clover, vetch, rape, cowpeas. How to eradicate weeds.

Horticulture.—Apples and plums—planting, grafting, propagation, protection from insects and diseases, pruning methods; strawberry and bush fruits—same outline as for apples and plums.

Entomology.—Sprays and spraying for the important local insects. Testing of Paris green and the other sprays for impurities.

Animal husbandry.—Horses, draft and roadsters—care, feeding, judging. Dairy cattle—care, feeding, judging, proper rations, dairy herd records, milk testing, testing for tuberculosis, treatment of milk fever, feeding of silage.

Farm mechanics.—Construction of portable hog houses and other simple buildings. Road building and the maintenance of a good road.

SECOND-YEAR COURSE.

Animal husbandry.—Horses—care of foal mare, care of foal, veterinary work, unsoundness of horses, sweened shoulders, splints, corns, thoroughpin, age of horses. Hogs—feeding, ration for young pigs and fat hogs, preparing hogs for show purposes.

Sheep—proper houses, trimming, feeding, treatment for bloat. Poultry—good breeds, poultry houses, feeding. Dairy and beef cattle—more advanced work than in the first year.

Rope work.—Making of rope halters, splicing rope, tying knots.

Cereal and forage crops.—Proper rotations for the soil of this county. Soiling and silage crops. Advanced grain judging. Identification of weed seeds.

Farm mechanics.—Buildings, drainage of marsh lands, fence building, making of concrete fence posts, gas engines.

The Associated School at Spring Valley has annually, in addition to the regular short course, a junior course for the farmers and their wives. It is six days in length. Special work is arranged for (1) the farmers, (2) their wives, and (3) the rural teachers of the associated schools. Says the short course announcement:

There is no age limit; all we want is to gather together the farmers and their wives. No one will be refused instruction; but the course is especially adapted to the farmers conditions.

A man can take any two subjects, such as animal husbandry and farm crops, or he can substitute one of these with cooking or sewing. This is likewise true for the women.

In case of the teachers of the rural schools, it will be necessary that they take a different course, which will be farm crops, cooking and sewing, and in some cases animal husbandry.

No one can take one subject one day and change the next, as this will make confusion.

The daily program of work for farmers' wives illustrates well the definite character of this school for grown-ups:

Monday.

10 a. m. Talk on food—its use in the body—digestion—effect of cooking—preparation.

1.30 p. m. Demonstration. Eggs and milk—(a) custards—(b) omelet.

3.30 p. m. Sewing methods—fastenings—sewing on buttons—buttonholes—hooks and eyes—loops.

Tuesday.

9 a. m. Economy in the home—labor-saving devices.

10.30 to 12 a. m. Demonstration. Cooking starchy foods—(a) cereals—(b) use of fireless cooker—(c) making white sauce.

1 to 2.30 p. m. Demonstration. Setting the table.

2.30 to 4 p. m. Talk on home decoration.

Wednesday.

9 to 10.30 a. m. Talk on meat—principle of cooking.

10.30 to 12 a. m. Demonstration. Cooking the cheaper cuts.

1 to 2.30 p. m. Talk on care and feeding of little children.

Thursday.

9 to 10.30 a. m. Talk on home nursing.

10.30 to 12 a. m. Demonstration. Invalid cookery.

1 to 2.30 p. m. Vegetable cookery—demonstration—preparation of two or more vegetables.

2.30 to 4 p. m. Repairing—(a) stockingette darn—(b) cloth darn—(c) patching.

Friday.

9 to 10.30 a. m. Talk on yeasts and baking powders.

10.30 to 12 m. Demonstration. (a) Use of bread mixture—(b) white bread.

1 to 2.30 p. m. Garment seams—demonstration of corset cover.

2.30 to 4 p. m. Laundry work—removal of stains—washing linen, woolen, silk, etc.

Saturday.

9 to 10 a. m. Talk on preservation of foods.

PLANS OF THE STATE SUPERVISOR OF TEACHER TRAINING IN HIGH SCHOOLS.

The objection made in the body of the bulletin, that the Minnesota teacher-training departments have not laid enough emphasis on rural leadership subjects, is now in a fair way to be removed through the effective work initiated by the newly appointed training supervisor, Miss Mabel Carney. She offers the following plans as a basis for future work of the training departments:

I. GENERAL PLANS FOR DEVELOPMENT OF TRAINING WORK.

1. *Instructors:* Their increased preparation and efficiency.
 - a. Securing the cooperation of the State normal schools and of the college of education in establishing special rural school departments for the preparation of training teachers.
 - b. Summer-school courses at the college of agriculture.
 - c. Summer-school courses at Teachers College (Columbia University), Cornell University College of Agriculture, University of Wisconsin, and elsewhere.
 - d. Rural spirit and knowledge especially desirable for training teachers; secured while teaching, through the study of rural literature and attendance at rural meetings; also from taking special rural courses in university summer schools.
2. *Students:* A more careful selection desirable.
 - a. Only students of ability permitted to enter departments.
 - b. Supervisor and training teachers to investigate previous records of all students in departments.
3. *The course of study:*
 - a. An adjustment of the subnormal high-school course, placing some academic courses in the junior year, is recommended.
 - b. Emphasis upon definite professional courses in pedagogy, country-school management, and rural life.
 - c. Rural adaptations in subject-matter courses. (To be worked out cooperatively and published in bulletin form later.)
4. *Practice teaching:*
 - a. Brief course in observation preceding practice recommended as a protection to both children and cadets.
 - b. The management and use of country schools for observation and practice.
 - c. The abolition of the ungraded room when composed of defective children.
5. *Increased rural spirit in training departments:*
 - a. Country-life clubs or farmers' clubs in high schools, associated districts, and communities of rural training schools.
 - b. Contests among students for rural poems, country teachers' creeds, farm-life stories, essays and orations on rural subjects, etc.
 - c. Extension work.
 - (a) Talks by the training teacher in rural districts.
 - (b) The training department as a county educational center.
Equipment for this purpose: Exhibits; photographs; stéréopticons; slides at State office.
Saturday office hours.
Organization of alumni of the department.
6. *Relationships of training departments:*
 - a. To State normal schools—rural-school departments needed.
 - b. To the university—a rural department in the college of education.
 - c. To the county superintendents—an advisory board of three.
 - d. To city superintendents and local high-school boards—greater interest in the department and more local expenditure for its support.
7. *Quarters and equipment:*
 - a. Usual teaching materials and equipment.
 - b. Special rural features in equipment: Sand table; shelf of country-life books and bulletins; reading table of rural periodicals; rural school and country-life exhibits; rural-life pictures; blackboard quotations and decorations, etc.

8. *Assistance from the supervisor's office.*

- a. Office to serve as a bureau of information and clearing house for training teachers, superintendents, and others.
Records kept of supervisor's visits; of students, teachers, money expended, vacancies, candidates for vacancies, etc.
General source of information on development of training work in Minnesota and other States; and on country school and rural life questions.
- b. Correspondence.
- c. Circular letters—reporting visits and announcing recent articles, books, forthcoming plans, etc.
- d. Bulletins—containing outlines for courses, special contributions by various teachers, etc.
- e. Collection of books and bulletins recommended for use in departments.
Possibly a loan library established.
- f. Photographs for exhibits at conferences and to illustrate bulletins.
- g. Slides to loan departments for class teaching and extension work.

9. *Some general principles to be emphasized.*

- a. Honesty to the State in giving value received for all money expended.
Danger of exploiting the training system for local ends.
- b. Rules of the high-school board consistently enforced.
- c. Initiative and freedom of training instructors to be preserved. Teaching constructive and contributory to the solution of the general State problem.

II. CONSTRUCTIVE PROBLEMS FOR THE ATTACK OF TRAINING TEACHERS.

Problems from the course of study.

1. Courses with reference and bibliographies in professional and rural work: (a) Elementary pedagogy or teaching process; (b) country school management; (c) rural sociology or course in country life.
2. Courses in regular subjects showing content, rural adaptations, and instruction in method of presentation: (a) Arithmetic; (b) geography; (c) history and civics; (d) composition and grammar; (e) reading (especially beginning reading); (f) physiology and rural sanitation; (g) music; (h) drawing; (i) story telling.
3. Courses in industrial subjects, showing content, rural adaptations and instruction in method of presentation; giving also lists of materials and equipment recommended: (a) Agriculture; (b) cooking; (c) sewing; (d) manual training; (e) primary handwork.
4. Practice teaching: (a) Outline of a course in observation for training departments; (b) the establishment and management of a rural training or observation school; (c) managing practice to the best advantage in the ungraded room or in city grades.
5. Card catalogue of annotated references in magazines and periodicals for department use.
6. Lists of songs, pictures, poems, and stories for rural schools, emphasizing beauty and satisfaction of country life.
7. List of fiction (novels and short stories) dealing with child life and pedagogical subjects.
8. List of rural life stories and novels.
9. List of educational helps and sources for country teachers.
10. Outline of elementary course in the study of country life for older pupils of rural schools.

Problems arising in the administration and management of training departments and country schools.

11. A suggestive program of studies for the normal year, showing arrangement of the subnormal high-school course.
12. A recommended program for country schools.
13. Opening exercises for country schools; study of their influence; suggestions for; and collection of material to use.
14. A campaign for the consolidation of schools; method of procedure, literature, statistics, aids, etc.

Problems arising from the social and community phases of country schools.

15. Country Life Clubs—their organization and management; model constitution; sample programs; topics recommended; suggestions for the social hour, etc. Worked out in the local high school, in associated rural districts, or in the community of the observation and practice school.
16. Boys' and Girls' Clubs—encourage normal students to work with country children in conducting industrial contests (as developed by the agricultural college), corn and canning clubs, camp fire girls' groups; Y. W. O. A. organizations, etc.
17. Programs for school entertainments and special days.

Problems relating to the country school plant and equipment.

18. A list of furnishings and equipment for country schools, with purchasing firms and prices, and a collection of catalogues.
19. Hot-lunch equipment and recipes.
20. Plans of a model rural school building.
21. Plans for model school grounds.
22. Model school building made by normal students in manual training.
23. Sand table exhibit to display at local farmers' institutes or fair, showing miniature models of a country school building, and of school grounds, properly landscaped and equipped with model playground apparatus.

Miscellaneous.

24. A directory of rural progress for Minnesota.
25. Sand table exhibit of a model rural community center, showing a consolidated school, country church, cooperative industrial plant, grange hall, etc.
26. Sand table exhibit of a model farm, showing crop rotation, location, and plans of buildings, etc., for use in agriculture, arithmetic, and beginning reading.
27. Special studies of rural conditions in Minnesota, as maps and diagrams showing tenancy, depletion of rural population, land values, etc.